CHEMICAL MARKETS

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A Monthly Economic Review of Chemistry and Industry

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FEBRUARY 10, 1927

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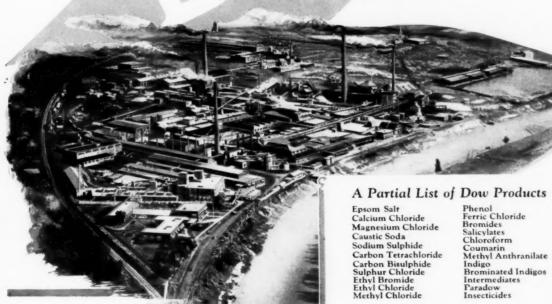
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The Importance of Quality Insurance

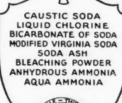
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CHEMICAL MARKETS

Vol. XX

NEW YORK, FEBRUARY 10, 1927

No. 6

Codifying Sales Abuses

T has of late become quite the fashion for industries to set up Codes of Ethics for their own edification and the admiration of all and sundry. These moral mandates are of two sorts; those that deal in glittering generalities and those that get down to facts. The former are merely more or less skillfully worded expressions of the hopes or the fears of that particular industrial group. are illuminating as to the state of competition, the extent of co-operation, the character of organization within that particular industry, and often they mark a genuine wish for guidance among the tangled rights and duties that lie beyond the domain of the law courts. But the latter often serve more practical purposes. They define issues sharply and lay out the definite plan of a great campaign. American fertilizer industry has recently drafted a Code of Ethics that falls safely within this second class. For this good work, our hearty congratulations.

No other branch of the American chemical industry is so beset with dangers and difficulties. Therefore the entire industry will find in this code of the fertilizer makers an epitome in most concentrated form of chemical sales abuses. Highly seasonal demand; extreme Governmental supervision; wide variations in overhead and selling expense; diverse methods and channels of distribution; prices that are never openly published and always subject to numerous, uncertain discounts—all of the hard conditions which surround all chemical sales competition are just a little bit

more hard within fertilizer circles. No other body of men is better qualified by tested, first-hand knowledge to codify the abuses that beset chemical sales. None others have so rich a fund of bitter experience to draw upon in planning practical remedial measures. Accordingly their definitions are easily understandable and their plan of campaign commands wholesome respect for its workmanlike directness.

HERE are their constructive proposals: Competitors must honestly determine their costs upon identical estimates and an equitable basis of accounting. Waste can be eliminated by reducing the multiplicity of grades and packing. Freight is a part of cost to be borne directly by the buyer. Prices may be cut by providing trucking or warehouse service, by allowances for advertising, by making up special formulas, by split commissions, by unduly extended credit just as directly as by an actual cash reduction in price. terms are a part of price and should be uniform. Guaranty against price decline puts the weaker manufacturer at the mercy of a stronger competitor. Definite knowledge of conditions of supply and demand would tend to stabilize market conditions and the statistics of stocks, production, shipments, and average price may be lawfully assembled and exchanged by the National Fertilizer Association.

Each of those short sentences contains material for a good half hour's serious thought by the executives of every company in the chemical industry.

NITROGENOUS AMERICA

The chemical world, and in particular that part of it found within the boundaries of this country, has imbibed rather freely of nitrogen. Muscle Shoals has for a long time been a political sop dangled before the eyes of the farmer as something constructive that the Government was doing to assure the tiller of the soil of freedom from foreign domination and high prices in the purchase of his fertilizer. Moreover, the attention of every patriotic citizen has been called to the fact that nitrates are essential to national defense. Therefore, when Muscle Shoals was opened to bidding, it was impressed upon the bidders that nitrates for these two purposes must be included in the bid.

And during all the time that Muscle Shoals has been a football of politics, the chemical industry, unaided by the Government, has broken the grip of the nitrate monopoly by producing ammonia commercially. Today our largest explosive maker of this country, owning two nitrate plants in Chilè, is making nitric acid by oxidation of ammonia

made from the air.

The latest development in nitrogen, is the announcement of the Allied Chemical & Dye Corporation of its intention to erect a huge fertilizer plant at Hopewell, Va., to produce synthetic fertilizers on a grand scale. The Allied Corporation, according to its own statement has dismissed the Shoals from its mind, because of lack of deep water facilities. It is interesting to remember that Plant No. 1 at Muscle Shoals was built on specifications and plans supplied by this same company. What products are to be made at the new plant have not been announced, but rumor connects ammonia, ammonium phosphate, ammonium sulfate, and nitric acid with the new project.

That the Allied Corporation will manufacture a finished fertilizer and market their product direct to the consumer is well within the realm of possibility. This will undoubtedly have a marked effect upon the fertilizer mixers who are dependent upon outside sources for a large part of their raw materials. The whole structure of the fertilizer market is rapidly changing and at present waits the breaking up of the Chile nitrate producers' selling agreement on June first and the production of the new Terre Haute ammonia plant promised for

March fifteenth.

DEALING DIRECTLY

A marked tendency on the part of chemical manufacturers to deal directly with the ultimate consumer rather than through dealers and jobbers is coming to the surface in many directions. That some jobbers perform a distinct service to some manufacturers in the distribution of goods is not to be doubted. The handling of several sales

agencies by one jobber in a remote territory where no really large consumers are located obviously results in lower selling expenses. Small consumers probably prefer to order such widely diversified products as a barrel of soda ash, a drum of aniline oil and a barrel of stearic acid, and have the entire lot delivered to them in one truck promptly, then have to call up three different manufacturers.

As manufacturers grow in size, and particularly as they increase the scope of their manufactured articles, the necessity of employing jobbers is lessened. Direct contact with all consumers is much to be desired, and the small buyers probably appreciate more than larger ones, the calls made upon them by the salesmen of a large manufacturer. There also is a keen desire on the part of many consumers to deal direct with the manufacturer, due not doubt to the realization that times of scarcity of any product are apt to occur and then the larger the source of supply, the better. But it is doubtful if the consumers as a whole would be willing to effect this change to eliminate the third party to the transaction, and it is the manufacturer who is now making the effort.

These changing methods of distribution deserve the closest attention and the point of view of the jobber having been set forth in a recent issue, we shall give our readers next month the view of a leading manufacturer's veteran sales executive.

Considering the keen competition that now exists for world markets, an increase of eight per cent in exports of chemical products during 1926 is a remarkable step forward. The outstanding fact is that this increase is due to the growth of exports of disinfectants, insecticides and fungicides, and also to the greater quantities of specialties that are being marketed in other countries. American products are establishing themselves on a firm basis abroad, and are probably considered in other countries with the same degree of confidence that Americans expressed in imported products prior to the war.

[Ten Years Ago]

(From Drug and Chemical Markets, Feb. 7, 1917.)

Central Railroad of New Jersey has refused to accept shipments for export, owing to lack of steamship space.

Quicksilver is advancing. Many dealers are asking \$96 a flask, a sudden rise from \$90.

Prof. Joseph Stieglitz, Chicago University, has been chosen president of American Chemical Society.

Causes soda was offered at \$4.05@\$4.10 per hundred

for 76 per cent fused.

Sulfuric acid demand was very brisk and o

Sulfuric acid demand was very brisk and quotations advanced to \$30 a ton for 66-degree brimstone and \$20 for 60 degree.

William S. Gray & Co. have increased their capital stock from \$250,000 to \$500,000.

A Market Survey of

NITROGEN

OMPETITION between natural, by-product, and synthetic nitrogen becomes keener and keener day by day. The chem-. ical element N, although it comprises about four-fifths of the air, is nevertheless so inert, so chemically inactive, that its free form must be "fixed," chemically combined with other elements, before it becomes a product of our markets, an industrial raw material. It commonly comes into chemical commerce in three forms, and from three sources: from Chile saltpeter, sodium nitrate, NaNOs; from coke or gas plants as ammonium sulfate, (NH4)2SO4; from the air by chemical synthesis of ammonia, NH4. According to its source, nitrogen is known as natural or nitrate, as by-product or sulfate; as synthetic or ammonia. There are other sources, but they are unimportant in market conditions today.

But whatever its source, the price is always predicated upon the cost of the contained nitrogen, whatever its commercial carrier and in the long run it is on these comparative costs that the battle for the world's markets will be finally determined. In forejudging all future price movements, therefore, the basis of comparison will be the actual costs of producing in marketable form a single unit of nitrogen. The buy-

A new ammonia plant projected in Virginia, a new synthetic process developed in Germany, a new extraction method in operation in Chile-since the first of the year these new developments have been recorded. Today stubborn, inert Nitrogen is the most important chemical in the world and of all the chemical elements, the most active in its market reactions. Its importance in world trade and as a war munition focus the attention alike of the financier and the statesman. Swift, radical advancements in synthetic technique hold the interest of chemists and manufacturers. Shifting sources and changing supplies affect the maker of fertilizers, of acids, of refrigerants, of dyes, of medicines; of explosives, who are all on edge watching market changes. This market survey, since the commercial aspects have been curiously overlooked in the voluminous current literature of Nitrogen, is undertaken to furnish a sound basis for future market analysis by both buyers and sellers.

Sources and Supplies

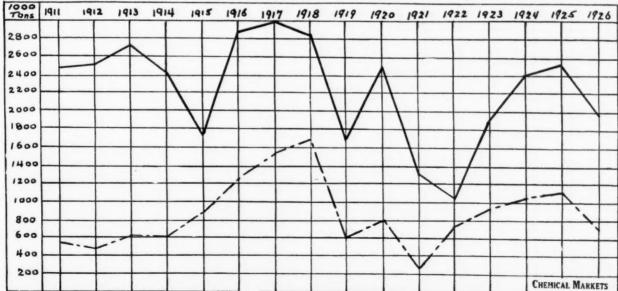
er will always be immediately and intimately concerned with the price of this unit of nitrogen in the various commercial carriers. So, at the very outset, let us set up the cost of the contained nitrogen in the three principal competitive chemicals, nitrate, sulfate, and ammonia, and from this foundation take up detailed consideration of the market position of each. At the "open market quotations," then, the current price of nitrogen is as follows:

Nitrate of soda @ \$2.64 per hundred pounds, nitrogen costs \$320.57 per ton.

Ammonium sulfate @ \$2.50 per hundred pounds, nitrogen costs \$235.73 per ton.

Anhydrous ammonia @ 12½c per pound, nitrogen per ton costs \$303.63.

Granted that at this time (February 5, 1927) these prices are all being shaded for competitive business and admitting the always present variations in local markets and different delivery charges, these figures nevertheless are striking confirmation that even in the present state of rapid change and great uncertainty prices are closely competitive. More closely competitive than might be suspected among a natural product from South America



Solid line shows world production of nitrate of soda; brok en line shows imports into the United States.



Opening Trench for Removal of Caliche

prepared for market by washing in water, a by-product produced willy-nilly in coke and gas plants and recovered by treatment with sulfuric acid, and a product made by a complicated chemical synthesis so new that its chemical reactions and its apparatus are both still in the actively experimental stage. Obviously the future will depend principally upon developments in the synthetic nitrogen industry, especially those developments which will lower the costs of fixing nitrogen.

Since 1830, when Chile first began exporting sodium nitrate, up to the close of the War, this natural carrier was the chief world source of nitrogen. Up to the turn of the century Chile nitrate supplied practically twothirds of the steadily increasing demand, the balance being furnished by the gradually increasing output from coke ovens and gas works of by-product nitrogen in the form of ammonium sulfate. At the beginning of the war the arc process in Norway and the Haber process just started in Germany had made but the first beginnings of the synthetic nitrogen industry. At that time the world's ratio of the world's supply was:

World's Nitrogen Production, 1913

	Tons
	fixed
Product	itrogen
Chilean nitrate	429,897
By-product ammonium sulfate	319,667
Synthetic nitrogen	91,491
Calcium cyanamid 66,138	
Arc process	
Haber process 6,614	
Total	841 055

By the close of the war these ratios had already been seriously disarranged not only by the increase in byproduct ammonia production, but also by the startling growth of the synthetic industry:

World's Nitrogen Production, 1918

Product	n	fixed itrogen
By-product ammonium sulfate		
Chilean nitrate		
Synthetic nitrogen		286,152
Total		1,320,380

Since the war, the tremendous expansion of the synthetic industry, most notably in England and in Germany, has still further swung the nitrogen balance out of line, as the production of the last year shows:

World's Nitrogen Production, 1926

	fixed
Product	nitrogen
Synthetic nitrogen	
By-product ammonium sulfate	
Chilean nitrate	374,125
Total	

As has been pointed out many times in CHEMICAL

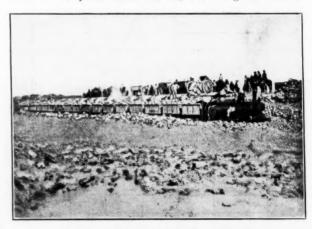
MARKETS our domestic ratios of both consumption and of production are unique. Compared with world consumption figures, we use less nitrogen on the farms and more in our factories. While our air nitrogen industry has been primarily engaged, up to this time, in supplying the refrigerating and chemical trades, the bulk of European synthetic nitrogen has been converted into fertilizer materials. The British Sulfate of Ammonia Federation has calculated that 88 per cent of the world's nitrogen goes to agriculture. It is, however, improbable if much more than half of the nitrogen in all forms which passes through our chemical markets is ultimately consumed as fertilizer. A half of this half is exported. American per acre consumption of fertilizers is low; nevertheless, more than half of all our nitrogen supplies during 1926 came from imported Chilean nitrate, while Chile supplied but 20 per cent of the world nitrogen consumption during that same year.

These facts emphasize two factors carefully and constantly to be kept in mind in considering American market conditions. First, our consumption ratios of nitrogen between agriculture and the various industries is distinctly different from the world averages, creating thus, unique market conditions in America. Second, our synthetic producers have not as yet turned seriously to the fertilizer field as an outlet and natural nitrate is still dominant in that sector.

Statistically at least Chilean nitrate is, therefore, still a factor to be reckoned with in American nitrate markets. But admittedly Chilean nitrate is in a precarious position.

From the dominating position of supplying 75 per cent of the world's nitrogen demand, natural nitrate has now only a scant 20 per cent share of the total. Since 1914 the decline has been steady, and even their best friends cannot claim that the situation which became acute two years ago has been suddenly thrust upon the producers without warning. High taxes, increased ocean freight rates, bad conditions in their two chief remaining markets, Egypt and our cotton states; further expansion of the synthetic industry; constantly lowering prices of both by-product and synthetic nitrogen-the Fates seem indeed to have conspired with Politics, with Chemistry, with Economics and even to have called in the Weather Gods to help make the acute situation facing natural nitrate producers extremely critical during the coming season.

There is but one flash of light on the gloomy horizon. Samples have just reached New York of the first commercial run of the new Guggenheim process of extracting nitrates from their native caliche. To the eye they are whiter and drier than the old product. Analysis shows them to be purer than the old refined grade and to

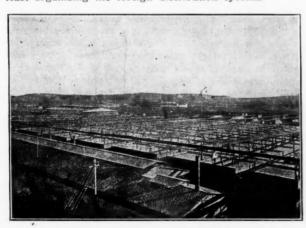


Loading Caliche into Railway Trucks

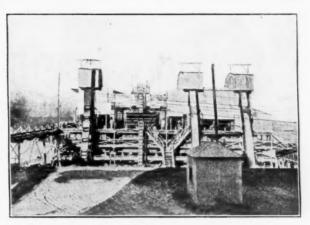
be virtually free of sodium chloride. If the economies claimed for this new process prove out, and the large scale production promised for March becomes a reality, here may be a solution for Chile saltpeter's many pressing problems.

In a great measure the Chilean producers have themselves and the Chile Government to blame for their present straits. For nearly a century they enjoyed a natural monopoly and they have been selling in a con-stantly expanding market. The dividend records of the various companies, ranging from 25 to 80 per cent, have justified fully the conservative British theory that foreign industrial investments should yield 25 per cent return. There has been little temptation to invest in technical improvements. The old Shanks process of boiling in water hand-picked caliches (which the skilled laborers could easily recognize as being comparatively high in nitrate content) involved slow and costly mining methods, but it reduced the amount of material handled from 50 to 85 per cent. The hot water process recovers only from 55 to 75 cent of the nitrate and that of only 96 per cent purity; but it does eliminate all of the magnesia and most of the chlorides so that the material has proved good enough for consumers both in the fertilizer and the explosive fields. Why worry about improved processes? Why attempt to reduce costs? Why, indeed?

Moreover, what necessity was there to perfect an efficient selling system? This, by the way, is considered by one man who has been long, closely associated with nitrate distribution in America as the real crux of the present situation. True, the production of by-product sulfate of ammonia has gradually mounted upwards. In the United States alone our output has grown from 6,300 short tons in 1900 to 640,000 in 1926. And yet, consumption of nitrogen has so steadily kept pace that the selling problem of the Chilean producers has been principally one of keeping prices steady to afford a reasonable margin of profit for the refineries which were working the less rich deposits and hence had higher costs. For at no time, until recently, did the demand fall to a point where it could be fully supplied by the low cost producers. Formerly there was direct competition among the producing companies, whose costs vary widely, so that speculators, aided by the seasonal demand, the distance from consuming markets, the irregularity of ocean freight rates, were able to exploit the market to their own benefit. Accordingly prices varied at Chilean ports, from 1900 to 1915, from 75c to \$1.83 per hundred pounds, and price fluctuations each season were often wide and sharp. The organization of the strong Nitrate Producers Association, backed by the Government, changed all this by adopting co-operative selling methods, allotting quotas, and in part at least organizing the foreign distribution system.



General View of Crystallizing Pans



Elevators from Crushers to Boiling Tanks

Foreign sales in the consuming countries have been handled, however, through agencies and brokers; not by a directly controlled sales force. It is said that even today there is no single selling factor in the entire world devoted exclusively and wholeheartedly to the cause of sodium nitrate. Those agencies that have sought business in chemical channels have usually carried glycerin for the explosive manufacturer; salt cake and soda ash for the glass trade, or other industrial chemicals. If they were specializing in fertilizer fields they have normally sold phosphate rock and potash; and even in many cases sulfate, tankage, meal and other raw materials directly competitive with nitrates.

As a result, the nitrate sales force has never been bound up, live or die; with nitrate interests. So long as they could sell some nitrogen carrier they could always interest their regular trade. In fact, in many instances, the very nitrate sales agencies have been valuable assistants in introducing substitutes.

With the steadily increasing output of synthetic nitrogen which, during the year just closed, increased in terms of pure nitrogen from 480 tons in 1925 to 700,000 and which will further increase probably to the astonishing total of 1,250,000 tons during 1927—with this increased competition the position of sodium nitrate producers is bad. The Chilean output has declined steadily yet it has not fallen away as quickly as consumption, so that there are present on hand stocks greater than the entire sales of the '25-26 fertilizer season.

A year ago out of 149 producers in Chile, 91 oficinas were working. This was reduced to 32 on December 31, 1926; and CHEMICAL MARKETS correspondent in Santiago advises by cable, February 1, that more have shut down since the first of the year and 9 others are understood to be closing shortly.

Total stocks on nand December 31, 1926, according to Aikman's report, were 1,826,000 tons against 1,720,500 a year ago; while the sales of the Producers Association for the last six months last year were 790,000 tons; against 1,715,000 tons for July-December, 1925. While the Chilean producers have disposed of but 34 per cent of their productive capacity, the synthetic and by-product producers, thanks to regularly reducing prices, have sold up their output. Constantly lower prices for sulfate, aided and abetted by the cotton crisis in both Egypt and the United States; by the failure of the Chilean Government to assist by removing the export duty of \$12. a ton; and by the lack of a well directed sales effort on the part of the producers will further curtail sales this Spring.

All these gloomy factors are summed up expressively in the quotations of nitrates shares in the British stock market. In the nitrate year of 1920-21 nine British companies with a combined capital of £3,400,000 reported

(Continued on page 246)

Joxic Effects of Solvents

Various solvents are employed in nitrocellulose lacquers. An understanding of the effects of these products upon workers is of prime importance

PRACTICALLY all solvents for nitrocellulose have a certain action on the human system which is more or less injurious. When solvents evaporate naturally in the open air, weak doses of air and solvent are breathed, and the effects are cumulative rather than immediate. On the other hand, when the solvents are heated, evaporation is rapid and the air becomes saturated with their vapors. Breathing such vapor-laden air results in the body being subjected to a heavy dose of the substance. It need scarcely be said that the rooms in which men are working and in which these vapors are found should be ventilated as effectively as possible. Furthermore, it is also essential that the workers be acquainted with the properties of the materials that they handle and understand their physiological action. On the other hand, it is often found that after the workers have been subjected to the action of these solvents for a certain length of time, they become more or less immune to their action.

In the following there will be described the important physiological actions of some of the more important solvents that are employed in the manufacture of cellulose lacquers.

Acetone is claimed to be the most harmless of all solvents that are used for this purpose in practical work. When it is breathed in small amounts, it has no injurious effects at all. In cases of mild poisoning with acetone the symptoms are headache and deafness. On the other hand, severe poisoning causes gasping, glassy stare in the pupils of the eye, unconsciousness and heart disturbances. In fact all the common signs of solvent poisoning are noticed. For additional information on acetone poisoning see Wolff, Die Loesungsmittel der Fette, Oele, Wachse and Harze, air necessary for narcosis is reached almost at no time. 1922, page 92.

Ethyl ether, on the other hand, belongs to the class of solvents that have a strong physiological action on the human system. It is of course a narcotic or anaesthetic used in the place of chloroform. However, in as much as a content of ether vapors in the air to the concentration of 3.5 per cent is not sufficient to produce anaesthesia and in as much as in practical work it is very essential that efficient ventilation systems be provided to get rid of the ether-air mixtures as quickly as possible for fear of explosions and fires, the lower limit of ether concentration in the air necessary for narcosis is reached almost at no time. When the worker is continually breathing in small quantities of ether all the time, the only effect this seems to have is a disturbance in the metabolism of the human system.

Ethyl acetate, another popular lacquer solvent, is a comparatively harmless substance. When breathed in large amounts and high concentrations it produces a sort of intoxication and as this effect continues a slight narcosis is finally produced.

Ethyl alcohol must be reckoned among the harmless sol-

vents, although it is possible to incur alcohol poisoning when one is careless. In small amounts ethyl alcohol has a stimulating effect on the system. When the vapors are breathed particularly in the warm condition, intoxication results. In this connection the constitution of the individual and his general immunity to alcohol vapors, due to long contact with them, play important roles.

Methanol is a strong poison. Its action on the nervous system is extraordinary powerful and often results in blindness. When imbibed internally it results in death. It is a fact that the vapors of methanol can have a very potent effect on the nervous system, producing inflammations of the nerve centers and finally blindness, as was observed on certain individuals who were subjected to its vapors in a closed room for a period of five to six days.

The effect of amyl alcohol is quite different. Here again immunity due to long contact is important. In cases of mild poisoning the results are headaches, coughing, difficulty in breathing and vertigo. In severe poisoning difficulties in seeing, deafness and delirium are observed.

Butyl alcohol is considerably less poisonous than amyl alcohol. Picand, in Arzneimittelsynthese, IV, Edition, page 133, by Fraenkel, developed a comparative tabulation on the poisonous qualities of the various alcoholic vapors. He designated the poisonous strength of ethyl alcohol as 1. Then that of propyl alcohol will be 2, that of butyl alcohol 3 and finally that of amyl alcohol 4. The increase in the narcotic action of these substances is somewhat in the same order.

Isopropyl alcohol has a lesser physiological action than propyl alcohol. The former can be used as a substitute for spirits in the manufacture of cosmetics.

Amyl acetate often produces nervous disturbances, headaches, burning of the eyes, coughing and other similar symptoms. On the other hand, it is seldom that really serious sickness is produced by this solvent. The first symptoms are irritation of the breathing organs, and this results in coughing. On longer breathing of these fumes, the blood pressure is increased and due to this the heart action becomes rapid. At the same time the blood becomes congested in the head and headaches result. Furthermore, it often happens that the individual is subjected to vertigo spells, becomes very much fatigued and experiences difficulty in breathing.

The substances that are sometimes used in the place of amyl acetate, such as butyl acetate and adronol acetate, have similar effects to amyl acetate. Nevertheless there is this difference in that in the most cases the physiological action of these substances is not nearly as strong as that of amyl acetate.

Methyl acetate, when breathed in high concentrations, can

(Continued on page 250)

2 JURPENTINE vent and diluent, selling at the lowest price in many years.

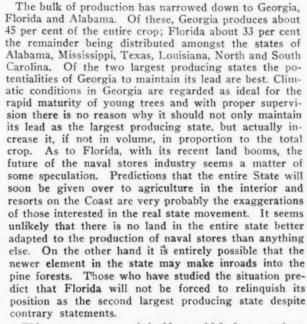
A well known chemical, sol-

HERE seems little doubt that the peak in the turpentine production was reached in this country about twenty years ago, when, during the season of 1908-1909 there was produced 750,000 barrels of spirit turpentine. Since that time production has been slowly declining, but not to the point of causing alarm as to the immediate future of the industry. Since the two poor seasons of 1918-19 and 1919-20 when production amounted to 340,000 and 400,000 barrels respectively, the output has been in the neighborhood of, or over, the 500,-000 barrel mark. The figures for this season are not yet available, but at present production is running about 5 per cent over last year, or something in excess of 500,-

Everything humanly possible is being done toward the conservation of this industry, so vital to the commercial life of the States bordering on the Gulf and the Southern Atlantic seaboard. One of the principal menaces to the turpentine industry, which far-sighted tract owners are trying to stamp out, is the tendency of the past few seasons to work trees of an immature age. Needless to say, should this practice become general, the turpentine industry would be in dire straits; but fortunately, modern production methods together with the realization that the indiscriminate tapping of trees is a serious menace to industry, will undoubtedly combine to eliminate this evil.

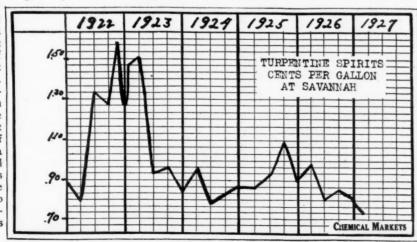
The naval stores industry is probably in better shape financially today than it ever has been. In recent years the value of the crops has grown and it is no longer possible for those without financial backing to enter into an agreement for the marketing of their products. It is therefore quite natural that those having investments in the business running into sizeable sums will make a more careful study of the natural resources of their tracts and plan accordingly. The detailed figures of how the "balance of power" has swung from the Carolinas to Georgia since the latter years of the nineteenth century are interesting and a story in themselves, too detailed to dscribe here. Briefly, they are a striking example of how in the early days of the industry, apparently little thought was given to the years to come. Producers thought only of the present, and as a result, the total

production today from North and South Carolina constitutes about 2 per cent of the entire output of the country. With this example before them it is reasonable to expect that the producers of today in Georgia and Florida will use every means known to science and business to prevent any similar occurrences in their states.



This year an unusual incident which has not been reckoned with, is the principal factor in determining the position of the market for several months to come. Some four weeks ago, a turpentne operator in London apparently "bit off more than he could chew," being unable to take delivery of 40,000 barrels for which he had contracted. Almost overnight the market in London, New York and Savannah declined and the net result of the failure was a 10c gal. decline at a time an advance seemed inevitable. Receipts at the Southern ports were smaller each day and the available stocks were disappearing. The throwing of 40,000 barrels on the market served to check any advance. In some quarters it is considered fortunate that the trouble in London did not take place in the Fall, when receipts were coming in sizeable volume, or the market here would have been more seriously affected. In any event, unless action is

taken to clear the London market of the distressed cel, a fair portion of the European business will be taken of from care London rather than from Savannah, which will of course have a tendency to prevent the market from advancing here. A study of the table shown here shows that 40,-



000 barrels, gauged on the figures of the past few seasons, represent about one-sixth of the total annual exports from American ports. It is also interesting to note that, the percentage of production exported has been steadily on the increase since 1921. For the season of 1925-26 it was approximately 48 per cent and if the current season runs true to form, it will reach 50 per cent.

Examination of the chart on the preceding page shows that at its present level, turpentine at Savannah is quoted at 73c gal., the lowest level touched since 1921. One large consumer, a close follower of the market, is of the opinion that at this figure turpentine is a good "buy," and buyers should not be surprised to see advances before the end of March in spite of the temporary depression caused by the London incident.

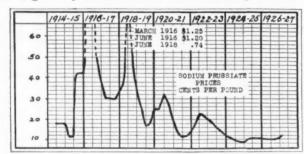
Turpentine Spirits Production and Export

Season	Production (in bbls.)	Exported (in bbls.)	Percentage Exported
1916-17	610,000	199,000	33%
1917-18	520,000	107,000	20%
1918-19	340,000	83,000	25%
1919-20	400,000	214,000	55%
1920-21	525,000	174,000	33%
1921-22	500,000	209,000	40%
1922-23	520,000	170,000	33%
1923-24	565,000	224,000	40%
1924-25	530,000	249,000	47%
1925-26	480,000	227,000	48%
		,000	- 10

Color Makers Face Higher Prussiate

PRICES of sodium prussiate have recorded two substantial advances within the past few months. After remaining steady over the first ten months of 1926 at 10 cents per pound, the price was advanced during November for contracts over 1927 to 11 cents per pound. Consumers were not convinced that the situation was strong and, according to reports, did not cover for a very large portion of their requirements. Now within the past two weeks, the price has risen another cent per pound and nowhere are goods obtainable under 12 cents per pound.

The situation of the dry color manufacturer who contracted to sell blue at low prices is not to be envied. Contracts for blues were offered for 1927 at 29½ cents per pound, which is certainly not above, and probably below, the prices obtained for 1926 deliveries. Potential production of chrome yellows, iron blues and chrome greens has long been greatly in excess of consumption. It is generally conceded that for some time past there



has been little or no profit in yellows or blues, and now within the past six months, the position of greens (mixtures of yellows and blues) has become just about as bad. Factors state strongly that the only profits in dry colors are in the sale of toners and lakes. Unfortunately for themselves, and fortunately for the large makers of toners and lakes, the factors in chrome colors and iron blues are not able to convert their plants over night to the production of toners and lakes, nor are they able easily to establish themselves in this market.

One large maker of paints who manufactures his own colors and sells a surplus in the open market has within the past year dismantled two of his three plants located in different parts of the country. He can see no profit in selling blues, yellows and greens on a contract basis and is content to accept what small orders come his way at profitable prices. On the other hand consumption of dry colors is large. There has been no shrinkage in the volume moving. Statistics issued on paint, varnish and lacquer manufacture show steady advances in the total production. Printing ink manufacturers are very busy.

The situation in sodium prussiate is similar to another raw material of prime importance to dry color makers, sodium bichromate, in that there are only three makers in this country. Imported material was only a few years ago the principal source of supply of prussiates. At that time there were but two makers in this country. Prussiates were then obtained both here and abroad by treating "spent oxide," a by-product of gas manufacture, with water and carbon bisulfide to remove the ammonium and other soluble salts and sulfur, and then treating the residue with lime and heating, subsequently adding sodium or potassium chloride according to the products desired. The third maker in this country makes the material directly from raw materials of which unlimited amounts are directly under control.

Present prices are not high when the past history of sodium prussiate is reviewed. Only during the past three years have prices been below current quotations, and during that time 9 cents per pound represented the bottom of the movement. During the period of the war peak prices of \$1.25 per pound were reached during 1916, and 74 cents was reached during 1918. For a long period prices never dropped much below 20 cents per pound. However, when prussiate was selling over 20 cents per pound, some blue makers stopped using it, and used sodium cyanide with additional copperas to make their blues. Thus they were manufacturing their own prussiate. It was stated at the time that upwards of 15 cents per pound for prussiate would cause blue makers to use cyanide. But cyanide has declined in price since then and the change-over price would probably be lower. Makers of blues, however, are not inclined to use cyanide unless they are forced to for self protection, as it involves great risks in the health of the

Today importers are practically out of the market. Imports during 1926 totaled only 828,012 pounds, valued at \$56,424, against importations in 1922 of 4,139,012, valued at \$693,647. The leading import factors in the market have left it entirely to domestic manufacturers. Some offerings were made a few months ago at prices shading the domestic quotations by 1/8 cents per pound, but this represented a very close margin of profit to the importer and consequently it was exceedingly hard to do business. Generally speaking 1/8 cents per pound is not of sufficient interest to a consumer to make up for the possibility of delayed shipments from abroad.

Editor, CHEMICAL MARKETS:

The article "Polite Business Blackmail" by William H. Zinsser is a "peach." I wish every signer of a contract would read it and get its message.

I only disagree with it in one point, that he finds there are only 5 per cent of the concerns that use the type of arguments he mentions. Sometimes we get so pessimistic that we think that the percentages are just reversed, in that about 5 per cent endeavor to live up to their obligations and 95 per cent endeavor to disregard them.

THOMPSON-HAYWARD CHEMICAL COMPANY. By C. T. T.

Kansas City, Jan. 19.

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Tertilizer Trade Practices

Code of Ethics, recently adopted, calls forth constructive comment from leaders of the industry

The following Code has been formulated with a view to eliminating waste and unfair trade practices while have been prevalent in the fertilizer industry and which have ed to demoralization which is disastrous to the manufa turers and which in the long run cannot but also operate to the detriment of the consumers:

1. Sound Accounting Methods. Manufacturers should recognize the sound principle that in manufacturing and selling their product cost should be accurate by determined and carefully considered. A scientific system of cost a counting should be established and applied in order that manufacturers may know accurately the cost of their product and the relation of price thereto. In this connection the attention of manufacturers is called to a recent study entitled "Cost Accounting and Cost Estimating" prepared by the Cost Accounting Committee of The Na-tional Fertilizer Association.

2. Elimination of Waste. Wastetul self-ing methods should be eliminated. A mu tiplicity of grades adds materially to the cost of mixed fertilizers and, as pointed out by the Federal Trade Commis-sion in its investigation of the fertilizer industry, there is no economic justification therefor. A redu tion of g ades is therefore recommended as a measure of economy. It is further recommended that the omy. It is further recommended that the manufacturers avoid the practice of making up fertilizer (actually of standard grades) for sa e under private brands, and a so the pactice of empounding special formulae for individual buyers.

Since freight rates constitute a material portion of the cost of fertilizer, it is rec-ommended that manufacturers, who are ommended that manufacturers, who are primarily wholesaless, market their product in car oad lots only so as to avoid the large differential between carload and less than carload shipments.

3. No Secret Discriminations and Rebates. Manufacturers should scrupulously avoid the granting of secret rebates irrespective of the form assumed. Competition should express itself openly rather

than in special and discriminate y form. Among tractices violative of this principle which have heretofore prevailed and the elimination of which is recommended the following:

(a) Providing truck service without adequate charge for the same er reimbursing the dealer or purchaser for truck-

(b) Providing local warehouse facili-ties or reimbursing the dealer or pur-chaser for the actual or theoretical cost thereof

(c) The sa'e simultaneously with the sale of mixed fertilizer of chemica s and materials at special concessions designed to be an inducement to the buyer to pur-

chase mixed fertilizer.
(d) Failure to enforce in good faith the

(d) Failure to enforce in good faith the terms of contracts previously made for the sa'e of ferti'izer.
(e) Making up special formulae or using special ingredients in standard formulae without making adequate charge for the cost of such special formulae or special ingredients.

for the cost of such special topmulae or special ingredients.

(f) The making of special allowances to buyers for advertising.

(g) Adopting selling methods which, as experience has amp'y demonstrated, almost always promete secret rebates and concessions and put it out of the power of the manufacturers to control them. Reference is here particularly made to the practice of selling through commission agents and others who are irregularly employed and the compensation of whom, without being "oaded" into the price, is measured in terms of quantity sold. Where experience has shown that commission men and like agents customarily resort to split commissions, secret rebates, etc. the manufacturers shou'd sell only through regularly employed salaried salesmen and agents responsible to and directly controlled by the manufacturers.

(h) Extending credit terms which do not take into account the actual cost of money or of credit.

4. Avoidance of Unsound Credit Terms In certain sections of the country, buyers have customarily taken advantage of

open shipments" by taking and using the goods and then refusing to settle on any terms other than those satisfactory any terms other than those satisfactory to the buyer and often quite different f om the terms under which the contract of pur hase and sa e was made. Where this abuse has prevailed, manufacturers should sell only on terms such that to obtain the bill of lading, the purchasers must make payment in cash or negotiable promissory note for the contract price.

Where delivery is made against promis-sory note, the note should be made pay-able at the earliest date consistent with the p incip e that the ferti-izer should be paid for not later than the time when the crop, for which the fertilizer is employed, is marketed.

5. No guaranty against Dec'ine of Prices. Sales should be made at fixed prices and terms accepted in good faith by buyer and se'ler with the mutual intention of complete performance. The manufacturers should avoid selling under conditions which provide for a reduction of price of grods previously sold in the event of subsequent sales of like goods at lower prices. at lower prices.

The effect of this practice is to apply to all goods sold the lowest price which may be quoted by any competitor to any buyer, even though much below the cost of production. This puts the weaker manufacturers at the mercy of the stronger.

turers at the mercy of the stronger.

6. Exchange of Statistical Information. In order that the relations of supply and demand and the statistical conditions existing from time to time in the fertilizer industry may be known, it is proposed to establish a Bureau of Statistics of The National Fertilizer Association, to which periodical statistical reports shall be made, giving information with respect to stocks on hand, production, shipments, average prices realized, and such other statistical information as may 'awfully be assembled and exchanged and which shall relate entirely to past and completed transactions. Details as to the foregoing will shortly be elaborated and submitted to the manufacturers.

The provisions of the Code are based upon legal decision and decisions of the Federal Trade Commission. They have been declared proper in other connections and we believe that they are peculiarly suited to the fertilizer industry at this time. It is hoped that the Code will secure thorough cooperation throughout the industry and will do much to re-establish it on a sound economic basis, which is desirable as much from the farmer's standpoint as it is their own.

President Nat. Fertilizer Ass'n. and Vice-President, Virginia-Carolina Chem. Corp., Richmond, Va.

In my opinion the Code of Trade Practices simply outlines sound, clean methods of doing business, and points the way towards curing quite a number of evils which have existed in the fertilizer industry.

Gustavus Ober, Jr.,

President, Ober & Sons Co., Baltimore, Md.

This Code was formulated with a view of eliminating waste and also unfair trade practices. The preliminary statement makes this clear. The fertilizer industry realizes very acutely the present depressed condition of the agricultural industry and believes that anything that can be done to eliminate waste, with the probable consequent reduction in price, will be of the greatest benefit at the

Fertilizers have been sold at and below cost during the past year. There is no possibility of further reduction without further economies. If these provisions will effect a saving, they will afford their own greatest argument for their soundness.

L. E. Elwood,

President, Farmers Fertilizer Co., Columbus, Ohio.

The fertilizer industry realizes now, more than ever before, especially after passing through the period since the world war, that the Code of Trade Practices is of vital importance. However, I am strongly of the opinion that the whole situation is in the hands of each individual company and that it is for the executives to take upon themselves the responsibility of knowing that the trade practices are carried out to the letter. In the past altogether too much lee-way has been passed on by executives to subordinates without proper check, as a result demoralization along lines outlined in the code of

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trade practices, which will continue unless each executive take the responsibliity his position demands him to take.

A. B. Grafius,

Treasurer, Coronet Phosphate Co., New York.

Action taken by the manufacturers of fertilizer, at the Convention recently held in Washington, is a most decided step forward and should prove of great benefit both to manufacturers and users of fertilizer.

The stability of an industry, it seems to us, is most important and is worth an infinite amount of effort of attainment. Such stability cannot be had through any but outright straight-forward methods of manufacture and sale. We are confident that throughout the fertilizer industry and the underlying industries which furnish the raw materials the Code of Trade Practices ultimately will result in the desired stability and in material advantage to all concerned.

J. S. Morgan,

President, Farmville Oil & Fertilizer Co., Farmville, N. C.

This new Code of Trade Practices which has been generally adopted by the industry is based upon sound business methods and should eliminate much of the waste and uncertainty which have heretofore existed in the conduct of our business.

The subject of sound accounting methods is a very vital problem with which the Industry should be thoroughly familiarized and it occurs to us that a free exchange of experience on this subject will be the most practical method of educating the manufacturers as to their actual cost of their finished product. By a comparison of our production costs with the same items of others engaged in the business, we can criticise our own costs and smooth out many discrepancies that may appear at the outset of this work.

The elimination of waste can be better understood when studied carefully in connection with a sound accounting system and when we fully understand the waste which is being produced by unnecessary selling expenses and losses occasioned by poor credit risks, the industry will naturally avoid these unnecessary expenses.

The several petty practices which are listed under item three are generally recognized as stumbling blocks not only to the manufacturers but to the dealers and consumers as well. The fertilizer manufacturer should not be expected to assume the role of dealer and if the manufacturer avoids as far as possible the making of sales direct to the customer, these petty practices of the past will quickly be eliminated.

C. F. Burroughs,

Vice-President, F. S. Royster Guano Co., Norfolk, Va.

No industry I know of needs curing of as many abuses as have existed in the fertilizer industry. I believe that the industry as a whole, appreciates the necessity of this policy.

W. D. Huntington,

Vice-President, Davison Chemical Co., Baltimore, Md.

No industry can prosper unless all of the manufacturers know their costs. The adoption of the uniform cost accounting system will do the industry a tremendous good. The elimination of secret rebates is of vital importance to any industry. It is very demoralizing and encourages the buyer to attempt to obtain special advantages through bargaining with one company against another. I am firmly convinced that the adoption of the Code of Trade Practices by the fertilizer industry will do more to put the business on a firm and profitable basis than anything that they have ever done. The Code has been adopted by eighty-five per cent of the

(Continued on page 250)

Dr. Weidlein and Mellon Institute

R. EDWARD R. WEIDLEIN, the recently elected president of the American Institute of Chemical Engineers, is the Director of Mellon Institute at Pittsburgh. Dr. Weidlein has been active in the application of Dr. Duncan's System since 1909, when he was graduated in chemistry at the University of Kansas (B.A.; also, M.A., 1910). Dr. Weidlein was promoted to the directorship in 1921, after he had served as associate direc-



Dr. Edward R. Weidlein

tor from 1916, senior fellow (1912-1916), and industrial fellow (1909-1912). During the World War he was acting director of the Institute and also chemical expert of the War Industries Board. He is an interested member of the American and foreign chemical and other scientific societies, which he has served in many official capacities. In 1924, the honorary degree of doctor ot science was conferred on Dr. Weidlein by Tufts Col-

Mellon Institute of In-

dustrial Research of the University of Pittsburgh has for its aim the creation of new knowledge by scientific investigation, in accordance with the Industrial Fellowship System of Dr. Robert Kennedy Duncan (1868-1914). institution was founded by Messrs. Andrew W. Mellon and Richard B. Mellon, whose constant interest has brought success to the application of the System.

The industrial research of the Institute is organized on a contract basis, the problem being set by the person, firm or association interested in its solution, the scientific worker being found and engaged by the Institute, and an Industrial Fellowship being assigned for a period of one year. Each holder of an Industrial Fellowship is given for the time being the broadest facilities for accomplishing a definite piece of research, and all results obtained by him belong to the founder (donor) of the Fellowship. Only one investigation is conducted on a particular subject at any one time, and hence there is no duplication of the research activities of the Fellowships in operation.

This System was introduced at the University in 1911, and its development since 1913, when the Messrs. Mellon established the Institute, has progressed to a strong position, which has been contributory to bringing the University international fame. The sixty Industrial Fellowships now operating require the services of over one hundred research chemists and engineers, who are mainly engaged in seeking new materials, new processes, and new uses of products, for industrial application, and in advancing manufacturing operations through the utilization of scientific methods. Many notable investigations have been carried out by Industrial Fellowships of the Institute, and every year a number of new commercial processes are developed and numerous discoveries are reported in the literature of science by Fellowship incumbents.

The Institute itself does not offer definite courses of instruction. It is primarily an industrial experiment station, and not a school; but the nature of its investigational procedure enables broad training of young scientists in research methods and in special subjects of technology. It also has a Department of Research in Pure Chemistry, which studies more fundamental problems than those usually in-

vestigated for direct industrial purposes.

Dumping Chemicals

One of the most important parts of practically all chemical plants is the pumps employed. A plant can be very rapidly crippled by failure of one or more pumps to operate. The various types of pumps employed all have distinct advantages when employed in the proper places

By S. G. Ketterer Chemical Engineer, Schutte & Koerting Co.

N chemical plants methods of pumping may vary quite a little from ordinary industrial pumping. Because of the influence of corrosion, presence of grit or crystals and at times decided crust forming solutions, perhaps all three together, the selection of the best method of pumping requires considerable thought.

In order to determine the most practical way, it is well to weigh conditions against all the usual methods, and by the process of elimination, determine the best course to follow. For instance, if we were to pump a solution of phosphoric acid made from phosphate rock, we certainly would not use an iron gear pump because the solution will corrode iron rapidly, and it contains quite a quantity of undissolved rock particles which would soon wear the close clearances required in a gear pump. Therefore it can be seen that by a process of thoughtful elimination a good selection can be made, provided the facts are known in regard to head, capacity, gravity, viscosity and corrodability.

The various methods of pumping as ordinarily used in chemical work are listed as follows: (1) Jet Pumps operated by a jet of either steam, air or liquid. (2) Centrifugal Pumps. (3) Displacement Pumps, either (a) Rotary Gear type (b) Piston type (c) Diaphragm type (d) Air or Steam Displacement in Blow-Case or Acid Eggs.

Jet Pumps can be divided into three classes, depending upon the pressure medium available; (a) Steam Jet Pumps, called Syphons; (b) Water or liquid jet, called Eductors; (c) Air jet, called Air Jet Lifts. Jet Pumps have several advantages, which comprise; low initial cost, low installation cost requiring no supports or foundations, no moving parts, therefore less wear and no leaks, no priming difficulties.

Steam Syphons work on the principle that when steam expands through an expanding nozzle into a vacuum created by the steam condensing, it develops a tremendous velocity which is imparted to the liquid to be pumped. Naturally they are self-priming. Where a heating of the solution is desired, a steam syphon makes an ideal proposition, as the steam does double duty. The steam consumption in a well designed syphon varies from 2 per cent to 20 per cent by weight of liquid pumped, depending on the counterpressure, with a corresponding temperature increase of from 12° F. to 50° F., depending on requirements. The steam pressure in pounds per square inch required for a given elevation roughly corresponds to the counterpressure figured in feet of water. For example, if the counterpressure or total lift, including pipe friction, is 50 ft., the approximate steam pressure would be 50 lbs. per square inch. The maximum suction lift with standard machines is about 15 to 18 ft., although special machines can be made to suck liquid as high as 25 to 26 ft. The temperature of the incoming

liquid must also be considered. A good practical maximum is 140 deg. F., although they can be used in certain conditions to pump liquids as hot as 180 deg. F. or better. The colder the liquid the less steam will be used for a given size and capacity.

Water Jet Pumps or Eductors work on a purely momentum principle. The mass times the velocity, or the momentum of the pressure liquid, is imparted to the liquid pumped. Where mixing of the liquid is desired, the Eductor is ideal. Standard operating conditions specify for a one to one ratio between the pressure liquid and the entrained liquid, with a four or five to one pressure drop. For example, in pumping out a pit, if a one to one quantity ratio is assumed it will require approximately 25 lbs. water pressure to pump against a head of 6 lbs. or 13 ft.

Air Jet Lifts operate on an entirely different principle inasmuch as air will not condense and create a vacuum, and because the velocity of air in a jet is very much less than that of steam; and still further, because air is not miscible with liquids, an Air Jet Lift must be submerged. The distance submerged depends on the height to be pumped. Fundamentally, the machine consists of a liquid supply pipe, going down to the machine, an air pressure line to the Air Jet nozzle and a discharge pipe rising from the throat of the machine. Compressed air is forced into the Air Jet Lift, where it mixes thoroughly with the downcoming supply liquid. The mixture of air and liquid has a lower density or less mass per unit volume than the liquid in the supply line. Thus an unbalanced hydrostatic pressure is created that is sufficient to force the mixture of air and liquid through the discharge pipe. This discharge is further assisted by the kinetic energy or energy due to the upward motion of the compressed air, which as it rises in the discharge pipe, expands and imparts velocity to the liquid. Thus it will be clearly seen that the Air Jet Lift must always be submerged. A good practical rule to follow regarding the necessary submergence is that the supply line must be dropped at least an amount equivalent to the lift.

To summarize the use of jet pumps, it can be said that they are simple and rugged in construction. They lend themselves easily to be made of a great range of materials. They have no moving parts which require attention or adjustment. As the pipe connections are amply strong to support the weight of the jet, no foundations or auxiliary supports are required. Their first cost and installational cost are very low. With these advantages in mind it is well in the selection of the best method of pumping to consider first the use of jet

Because of the higher mechanical efficiency centrifugal pumps are used to a great extent particularly where large capacity and continuous operation are required.

(Continued on page 252)

Germany's Chemistry

By William T. Daugherty
American Trade Commissioner in Berlin

HEMISTRY is now Germany's third industry on the basis of the value of gross exports after iron and steel and textiles. The year 1926 probably witnessed the lowest ebb of economic progress in Germany, under conditions of stabilized currency at least, since the war. Economic observers consider March, 1926, as illustrative of this situation, with its peak figures of unemployment and bankruptcies. Since then conditions have improved, with prospect of continuing.

Progress of the German Dye Trust as the largest industrial enterprise in the country typifies Germany's industrial recovery. Aided by the British coal strike and by the trust's program of domestic and international expansion and concentration of production, its stocks boomed from 115 per cent at the beginning of the year to a peak of

390 per cent, providing the most sensational event in local financial circles. Furthermore, after merging (and planning to merge) other local industrial enterprises, it raised its foundation capital to 1,100,000,000 marks on September 1, wresting from the newly founded United Steel Works first place among German industrial undertakings.

Within and outside of the Dye Trust there is marked effort to economize by horizontal association, extending, in some cases beyond "Germany and resulting in the formation of international "cartels," of which the international glue and saccharin conventions framed in 1926 are typical examples. Horizontal association within Germany in 1926 affected producers of lithopone, pyroxylin lacquers, yellow prussiate of potash, potassium and sodium nitrate, sodium sulphide, etc.

Production of fixed nitrogen in Germany was given impetus in 1926, with the result that it doubtless reached 500,000 tons of nitrogen, of which 85 per cent was synthetic. The remainder was coke-plant by-product sul-

The German Potash Syndicate promises to tighten the Franco-German monopoly by extending for 10 years its 1925 pact dividing export markets in the ratio of 70 per cent to Germany and 30 per cent to France. Internally the local syndicate members continued to concentrate production on a minimum number of shafts (63 in November, 1926, out of a potential 224), and in mass-production works. The German potash industry, however, is burdened by a heavy indebtedness of some half a billion marks, requiring an annual interest payment of some 35,000,000 marks.

The other branch of artificial-fertilizer manufacture is extremely depressed, producing superphosphate at about one-third its corresponding pre-war tonnage.

Three comparatively new German processes of pro-

Germany continues to make unusual progress in chemistry. The huge merger of the I. G. with its large capital expansion is but an indicator of the great projects that are planned. The outstanding results of German efforts in the chemical industry dur-

ing 1926 are extracted

ducing "oil from coal" attracted widespread interest in 1926. The German Dye Trust is expected to put its process into commercial operation shortly.

German chemists

German chemists were prolific in 1926 in advancing new processes and products of varying degrees of promise. Favorable mention has been given the Bayer company's new alleged malaria specific "Plasmochin," a quinine substitute; the same company's sulphuric acid-cement process; the German Dye Trust's new mixed fertilizers, and solvents; Gasgluehlicht Auer Gesellschaft new titanium white paint in lieu of lead colors; the Mont Cenis fixed-nitrogen process; the Bluemner cracking process.

The German Dye Trust made conspicuous progress in 1926 in fulfillment of its program of expansion, production alloca-

tion, and reduction of overhead, as calculated when the six leading German dye plants merged into one company-I. G. Farbenindustrie A. G. (Interessen Gemeinschaft Farbenindustrie A. G., referred to throughout this report as the I. G.), Frankfort on the Main—by approval of stockholders on November 28, 1925. During 1926 the I. G. merged or acquired full or partial control of the giant Koeln-Rottweil explosives plant (artificial silk, and other nitrocellulose production) at Berlin; Vereinigte Aluminum Werke A. G., Bitterfeld; the Erdoel & Kohle Verwertungs A. G. (coal hydrogenation patents), Berlin; Leonhardt color works at Mulheim; Schalke Metallurgical Works (lithopone), of Gelsenkirchen; and Rheinstahl, of Dusseldorf. The company also prepared the way for mergers in 1931 of Koeln-Rottweil's associated Dynamit Nobel, Hamburg; Siegener Dynamit A. G., Siegen, Westphalia; Rheinische Sprengstoff A. G., Cologne; Deutsche Celluloid Fabrik A. G., Eilenburg, as well as the Riebeck Montan & Oel Werke A. G., of Halle-on-Saale, to be consummated in 1930; in the meantime, the I. G. is sharing a "community of interests" with these. Each of these acquisitions coincides with an extension of production, and this move well illustrates the drive by this giant concern to develop new production to more than compensate for losses of its dyestuffs markets since the war.

Capital Increase

In connection with this program and its extension the I. G. formally raised its stock capital foundation at a general stockholders' meeting on September 1, 1926, from 646,000,000 marks (641,600,000 common and 4,400,000 preferred to 1,100,000,000 marks, or by 454,000,000 marks, to be covered by three shares emissions: (1) 258,400,000 new common, (2) 160,000,000 new 6 per cent preferred, Series A, and (3) 35,600,000 3½ per cent (Continued on page 256)

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Lat Extraction by Solvents

Extraction of fats and oils from oil seeds is becoming of steadily increasing importance. New apparatus, as well as the most suitable solvents now presented to this industry are described here

NE of the most important uses of solvents is the extraction of fats and oils from seeds and crushed meal. This process involves treatment of the meal with the solvents, carrying the fat or oil from the meal, and the evaporation of the solvent and its recovery, leaving behind the fat or oil. As in all industries, there has always been a keen desire in the fat extraction industry to increase the productivity of the plant. The usual way in which plant capacity has been increased is to increase the size of the extraction apparatus. However the use of large apparatus always entails additional labor and expenditure of time in loading and unloading the apparatus, which at times are not compensated by the increased production of the installation. Furthermore, in using large apparatus in any process, there is always present the difficulty of controlling the apparatus in a suitable manner. Not only, moreover, is there considerable loss in time between discharging the extracted meal and charging with fresh meal, which is always greater in the case of the larger apparatus, but there is also the condition that time will also be lost due to slower flow of the solvent through the mass of meal in the extraction apparatus. Also the steaming operation is of direct influence on the size of apparatus employed, for the reason that long steaming is necessary. This means that a certain amount of moisture is left in the meal and also in the oil which makes the extraction of certain seeds a difficult operation. Furthermore, the longer the time of contact between the fat and meal with moisture at an elevated temperature, the greater will be the danger that a portion of the fat is hydrolyzed with the result that free fatty acid is formed in the oil. The quality of such a product is of course not of the best. In addition thereto there are other operating difficulties such as those that arise in the use of large condensers, which are necessary in an installation of large extraction apparatus and the like.

It is therefore with a great deal of interest that we read of a new extraction process along new lines which is described by Simon and Hinchley in "The Chemical Trade Journal." This new apparatus and process are distinguished by the fact that the quantity of meal handled at any one time does not exceed four hundred pounds, while the output in eight hours is as much as three to four tons. The extraction operation lasts for thirty minutes and the steaming of the meal, for the purpose of removing its content of solvent, from four to six minutes. This is an extremely short steaming period and all the disadvantages of the long steaming period are eliminated while there is a considerable saving in time. It is really this characteristic of the process that makes it of such great interest to the fat extraction industry.

The reduction of the steaming period is moreover accomplished in a very simple manner by preheating the mass of meal to a temperature which is almost as high as that of the steam and also by arranging the mass of meal in the steaming apparatus in shallow layers so

that the steam passed through it quickly. A further advantage is indicated in the fact that where a few inches of meal are placed in a shallow layer for steaming all of the meal comes in contact with the steam for the same period of time.

Choice of solvent has always been a matter of prime importance. Some solvents are better suited than others for extraction purposes but then the mass possesses certain properties which counterbalance to a large degree the advantageous properties. For example a heavy solvent, like trichloroethylene, has been found very satisfactory for fat extraction, but its physiological action on the workers and its corrosive effect on the apparatus almost destroy its value as a solvent. This is particularly true when the extraction apparatus is large and consequently large quantities of solvents are employed. The new process, in which small apparatus is used, does not involve the use of large bodies of solvents and hence these disadvantages are not so important.

The apparatus in question consists essentially of a cage or basket which is carried on a hollow shaft through which the solvent and steam are allowed to enter. The cage is really a perforated drum. The drum is rotated at different speeds depending on the operation. The solvent enters through large pipes and the rotation of the cage gives constant agitation of the solvent with the meal, of which only a few inches depth is carried in the cage. The result is that the meal will carry only a small proportion of solvent after it is extracted and removed from the apparatus. The charging of the cage is accomplished through one end, by simply removing the endplate. After charging it is inserted into a cylinder which carries the rotating drive. After this has been done, steam is admitted into the cage with the result that most of the air is driven out of it.

The extraction machine carries three of these cylindersers with their cages. Each of these is operated separately. The charging and discharging are carried by hand but the opening and shutting of the various valves feeding solvent and steam into the apparatus are effected automatically by means of hydraulic time-cam controlled devices. Thus the cam shaft controls the entire operation from the moment that solvent is admitted to the cage until the extraction and steaming are completed. This is a particularly attractive feature.

Operation of the cam shaft starts just as soon as the meal is charged into the apparatus and the workman manipulates a lever which controls the cam shaft. After the cam shaft has made an entire revolution, a signal informs the operator that the extraction is completed and the cage which contained the extracted meal is then ready for removal. Each of the three cages is controlled and operated separately but they all feed from the same tanks and the solutions that are obtained from them are handled together in further stages of the process. The installation also contains the usual conden-

(Continued on page 264)

Growing Uses of Castor Oil

EMAND which has followed the discovery of a wide variety of uses for castor oil, has resulted in a large increase in its importation into the United States as well as its domestic production. Imports of that oil, which totaled 61,961,000 pounds in 1920 have increased to 100,908,000 pounds in 1926; the domestic output has increased from 24,187,085 pounds in 1920 to 45,049,646 pounds in 1926 and the factory consumption has gained from 6,527,908 pounds in 1920 to 16,304,612 last year.

One of the principal factors which has influenced this increasing trade in the oil of the castor bean is its growing use in a wide variety of industries. For example, the insolubility of castor oil in gasoline, combined with the fact that it does not break down under high temperature and pressure so readily as petroleum lubricants makes it an ideal lubricant for certain types of motors. Again, the increasing demand of the automotive and other industries for artificial leather, in the manufacture of which castor oil plays an important part, has caused a great increase in the consumption of the oil 'The leather trade itself finds a rather extensive use of castor oil both as a lubricant and as a soluble oil. In the manufacture of linoleum, in the dyeing industry, in the rubber industry, the varnish industry, in the manufacture of typewriter inks and in the production of flypaper castor oil is employed and the development of the demand for the products of those manufacturing processes creates an additional need for the oil

India has long controlled the bulk of the world's trade in castor beans. Prior to the war, 95 per cent of the beans on the world markets came from that country. England and the United States take the greater part of the annual output of India, which is from 250,000 to 300,000 tons. The crop comes on the market during the month of March and by the end of May most of the sales have been completed. Bombay is the principal shipping port for castor beans, with Madras second.

In the event that the India supply cannot meet the demands of the American markets, South and Central America could be expected to supply the castor beans needed by the United States. At the present time Brazil cultivates the largest acreage and this production could be quickly and greatly increased. The crop grown in Argentina is between 7,000 and 10,000 acres. There is an extensive territory in that country well adapted to the cultivation of the castor bean. Venezuela, Mexico, Dominican Republic, Haiti, Costa Rica and Nicaragua also present possibilities for development of castor bean production.

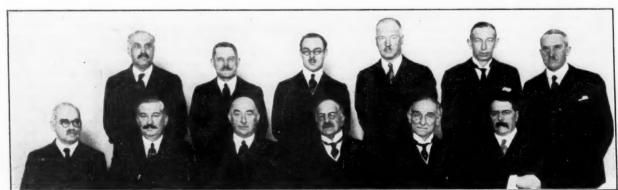
Who's Who in the Chemical Industry

Evan J. Crane, editor, American Chemical Society, Ohio State University, Columbus, Ohio. Born: Columbus, Feb. 14, 1889. Educat.: B. A., Ohio State Univ., 1911. Mar.: Sept. 30, 1914, wife dead. Children: son, daughter. Bus.: Have been with Chemical Abstracts since leaving school; associate editor, 1911-14; editor since 1914. Public Record: Mayor of Upper Arlington, Ohio, 1924-25. Mem.: Phi Beta Kappa, Sigma Xi, Phi Lambda Upsilon, Alpha Tau Omega, Rotary Club, Amer. Chem. Soc., Amer. Soc. for Advancement of Science.

Isaac Drogin, chemist in charge of production, J. M. Huber Co. of La., Inc., Swartz, La. Born: Russia, 1891. Educat.: B. A., 1913; M. Sc., 1917; Ph.D., 1919. Bus.: Research Fellow, Mellon Institute, 1915-21; with J. M. Huber Co. of La., Inc., since 1922. Mem.: Chemist Club, N. Y.; Amer. Chem. Soc. Remarks: Work on natural gas, gasoline and carbon black. Hobby: work.

Marshall Alexander Smith, pres., Smith Agricultural Chemical Co., Columbus, Ohio. Born: Sunbury, Ohio, May 23, 1869. Educat.: Public schools of Sunbury. Mar.: Cora M. Smith, Oct. 16, 1893 at Columbus. Children: son, 3 daughters. Bus.: Smith Agricultural Chemical Co. since organization, 1894, in executive capacity. Public Record: Member, by appointment, Columbus War Industrial Board, during World War; member, Co. C., 14th regiment, Ohio National Guard, 1886-89. Mem.: Columbus Country Club, Scioto Country Club, Athletic Club of Columbus, Elks, Columbus Chamber of Commerce, Navy League of America, National Fertilizer & Chemical Ass'n., Scottish Rite, 32nd degree Mason and Shriner; K. of P., Ohio Society, Sons of American Revolution, Society of Colonial Wars in Ohio. Hobbies: Genealogical work and preservation of State relics.

Edward A. MacKinnon, asst. sales mgr., E. I. Du Pont de Nemours & Co., Boston, Mass. Born: West Newton, Mass., Sept. 4, 1887. Educat.: Chemistry, McGill Univ. Mar.: Ammie E. Gilmore, Feb. 8, 1908 at Boston, Children: two. Bus.: Berlin Aniline Works, salesman, 1905-14; sales mgr., Butterworth-Judson Corp., 1914-18; asst. sales mgr., E. I. Du Pont de Nemours & Co., 1918 to date. Mem.: John Abbot Lodge, A. F. & A. M.; Chapter 42, Royal Arch Masons; Lafayette Commandery, No. 22; Aleppo Temple AAO-NMS; secy-treas., National League of Masonic Clubs, 1917 to date; Engineers Club, City Club of Boston. Hobbies: Golf, music.



Directors of Imperial Chemical Industries, Ltd. Front Row, left to right: Sir John Brunner, H. J. Mitchell, Sir Harry McGowan, (president and deputy chairman), Sir Alfred Mond, M.P. (chairman), the Marquis of Reading, and Sir Max Muspratt. Back Row: Sir Josiah Stamp, B. E. Todhunter, Harry Mond, Lt.-Col. G. P. Pollitt, J. G. Nicholson, and Dr. G. C. Clayton. Lord Ashfield, the re presentative of the British Dyestuff Corp., is not shown in the picture, having been absent through illness when the photograph was taken.

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Sodium Silicate for Roads

Use of sodium silicate appears to have originated 7 or 8 years ago in road construction work at Locle in Switzerland. The success of this construction instigated a test made in the Doubs, France, where the kilometre of this road constructed as a trial stretch is still in good service. This construction is now being employed in quite a number of the other departments in France, the French colonies and in several of the other European countries. Active propaganda for the development of this use is being conducted by the Bureau Technique pour le Developpement de la Route Silicatee, which is supported largely by the three important French producers of sodium silicate: Solvay, Etablissements Kuhlmann and Saint-Gobain. These three companies, and particularly the first, have been carrying on extensive research work and appear sufficiently satisfied with the results to back this bureau in its trade promotion work.

Employment of sodium silicate in French road construction appears to be rapidly gaining in favor. Between 800 and 900 kilometres averaging 6 metres in width have been laid in France. The above mentioned bureau gives as the present cost of constructing various types of roads, 6 metres wide with a length of 1 kilometre, as follows:

																Francs
Cement				 	 							٠				600,000
Asphalt					×	*		*	,	*						300,000
Sodium	silicate								,		٠	٠	۰		٠	40,000
Macada	m														 	35,000

Two brochures have been furnished by the Bureau Technique pour le Developpement de la Route Silicatee, containing photographs and testimonials of several of these roads in France. Since their publication apparently it has been found that soft rock as a bed is not successful and this material is no longer being applied in the silicate roads now under construction. Hard limestone appears to be the best base applied so far in silicate roads. Tests are leing conducted with roads employing the concrete base, but they have not yet been in operation long enough to determine their real value.

Nitrites for Meat Curing

Important discoveries in the chemistry of meat curing by Robert H. Kerr and associates in the Federal meatinspection laboratories appear to have wide significance. Though the art of curing meats by salts has been practiced from remote antiquity, only in recent years has the function of nitrates been correctly understood. The chief value of nitrates in meat curing is to fix the color and this occurs through a reduction of nitrate to nitrite and the combination of the latter with the hemoglobin of the meat. The nitrates themselves are without value as color fixatives and become active only when reduced to nitrites. In ordinary packing house procedure certain nitrate reducing organisms, which occur widely in nature, are responsible for the formation of nitrites, which in turn produce the desired curing results.

Means of eliminating the irregularities of nitrite formation naturally have been much sought for and the methods used have been held as trade secrets by certain establishments. Since sodium and potassium nitrites are well-known chemicals, it appeared fully as feasible to use the nitrite directly as to await the customary reduction of the nitrates. Accordingly, the department granted permission to an establishment operating under Federal meat inspection to conduct experiments on a commercial scale under the supervision of the Federal Meat Inspection Service. Several million pounds of meat were used in the experiments.

The results were highly favorable to the new method and none of the judges who ate the nitrite-cured meat noted any deficiency in the quality or flavor nor could distinguish it from meat cured by the customary process. In addition, the direct use of nitrite makes possible a shortening in the curing process ranging from 10 to 60 per cent of the former curing period. In numerous cases an improvement in quality of the meats was discernible. The substitution of a small, definite, and accurately controlled quantity of sodium nitrite for an indefinite quantity of the same substance plus an indefinite residue of unchanged nitrate is a distinct gain from the standpoint of public health. Another advantage of the new method is the accuracy with which the quantity of nitrite can be controlled, thus saving unnecessary costs of curing ingredients.

As a result of the experiments, which are of particular advantage to the meat-packing industry and directly to the entire livestock industry, meat-inspection officials of the Department of Agriculture have published the detailed scientific findings and have authorized the use of the improved method.

Properties of Ethylene Dichloride

The chemical and physical properties, synthesis, chemical stability, and industrial applications of ethylene dichloride have been thoroughly investigated at Mellon Institute of Industrial Research of the University of Pittsburgh, and the information that follows has been supplied by the Industrial Fellowship that has lately completed these studies.

Ethylene dichloride is a colorless liquid of a pleasant chloroformlike odor, which has the following physical properties: boiling-point, 83.5°C. at 760 mm.; melting-point,—36°C.; density 20.4°C., 1.2569; specific heat, 0.3054 at 30.°C.; latent heat of evaporation, 157.5 B. t. u. per 1b at 0°C.

Ethylene dichloride has high solvent action on oils and fats (such as lard, cocoa butter, butter, stearic acid, peanut oil, corn oil, etc.), waxes, wool grease, and certain alkaloids, gums, resins, and rubber. It may be used in the cleaning or degreasing of furs. Its solvent action is superior to that of the better known extraction agents, and it is extremely stable in the presence of water, alkalies or acids. It may be used in the presence of free chlorine, sulfuryl chloride, sulfur monochloride and other active reagents without being affected. Being quite resistant to oxidation it does not split off hydrochloric acid and produce oxidized products, as does chloroform or carbon tetrachloride; hence it may be re-fused or stored indefinitely. It does not corrode metals even in the presence of water at the boiling-point, and having low specific heat, density and latent heat, it may be recovered easily and economically. At ordinary temperatures, it will burn only with difficulty. This tendency is so weak that, when ignited, the draft of combustion will blow out the flame. It has some anesthetic properties, although its vapors must be inhaled in concentrated form over an extended period to produce an anesthetic effect. It causes no deleterious heart depression and produces no serious after-effects.

Since ethylene dichloride may now be obtained in the pure state at reasonable cost, it is well adapted to the extraction of edible oils, as its low boiling-point, 83.5°C., permits its easy recovery without leaving heavy ends or residues in the extract.

Aktivin (sodium salt of toluol-para-sulphon chloramide) has been found by B. Waeser to act more quickly upon textile fibres than perborate, and is more injurious to organic colors.

[Foreign Trade Opportunities]

Bichromate of soda and	
potash	Osaka, Japan Pu:chase
Caustic soda 23,767	Pernambuco Brazil Agency
Chemicals	Hongkong, China Agency
Chemicals, heavy 23,842	Pernambuco, Brazil Agency Hongkong, China Agency Be lo Horizente, Bra-
watering attery asjord	zil Agency
Chemica's, heavy, and	zii
tanning extracts 23.842	London, England Purchase
tanning extracts 23,842 Chemicals, industrial, and	London, Linguand I dichase
agricu tura' 23.836	Bucharest, Rumania Purchase
agricu tura! 23,836 Chemicals, fertilizers.	Ducha. coty Italiana and I dichare
and colors 23,850	Oporto, Portugal Purchase
02.041	
Dyes 23,841	Hongkong, China Agency
Gue and gelatine, raw	
materials for 23,843	Mannheim, Germany. Agency A exandria, Egypt . Agency
Matches 23,7 0	A exandria, Egypt Agency
Oil, birch-bark 23,874	London, England Purchase
Radioactive substances 23,873	Berne, Switzerland Purchase
Rosin 23.767	London, England Purchase Berne, Switzerland Purchase Pernambuco, Brazil Agency
Rosin, rosin size, and sulfur 23,840 Turpentine 23,836	
sulfur 23,840	Edmonton, Canada Purchase
Turpentine 23,836	Edmonton, Canada Purchase Bucha: est, Rumania Purchase
Benzol, refined and	•
penzoi, renned and	Newportle Fredand Durchase
crude	Newcastle, EnglandPurchase Christchurch, New Zea-
Carbon Diack	Christenuren, New Zea-
C1	landPurchase
Chemicals 23723	Basel, Switzerland Agency
Copper, carbonate 23682	Buenes Aires, Argen
Y2 /	tinaAgency
Rosin, turpentine, and	
su phur	London, EnglandAgency Durango, MexicoPurchase Be in, GermanyPurchase
Sodium si icate 23734	Durango, Mexico Purchase
Varnishes, automobile 23733	Be in, Germany Purchase
Casein 23 71	Mannheim, Germany. Pu chase
Paints and varnishes 23648	Rome, ItalyAgency
Peroxide of Hydrogen	Rome, Italy
manufacturing mate-	
rials	Parata Calambia Durahasa
	Bogota, Colombia Purchase
Phosphate rook 23667	Dresden, Germany Pur hase
Phosphate rock 23668 Soda, caustic 23670	Dresden, GermanyPur hase Hamburg, GermanyPurchase Amritsar, IndiaPurchase
Soda, caustic 23670	Amritsar, IndiaPurchase
Spermaceti for medical and technical use 23667	D 1 0 D 1
and technical use 23667	Dresden. Germany Purchase
Terpineol and other pine	
products 23664	Toulon, FranceAgency
Chemicals32108	Brussels, BelgiumAgency
Chemicals	Brussels, BelgiumAgency Brussels, BelgiumPurchase
Chemicals	Brussels, BelgiumAgency Brussels, BelgiumPurchase San Jose, Costa RicaAgency
Chemicals	Brussels, BelgiumAgency Brussels, BelgiumPurchase San Jose, Costa RicaAgency
Chemicals	San Paulo Brazil Purchase
Chemicals	San Paulo Brazil Purchase
Chemicals 23137 Chemicals 23184 Chemicals, industrial, and naval stores 23105 Fertilizers, chemical 23106	San Paulo Brazil Purchase
Chemicals	San Paulo Brazil Purchase
Chemicals 23137 Chemicals 23184 Chemicals, industrial, and naval stores 23105 Fertilizers, chemical 23106 Paints 23107 Paints, preservative 23138	San Paulo Brazil Purchase
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Third edition of a very comprehensive work on the subject, brought up to date.

CHEMICAL ENGINEERING ECONOMICS. By Chaplin Tyler, assistant editor, Chemical & Metallurgical Engineering. Cloth bound, 271 pages. Published by McGraw Hill Book Co., New York.

A highly intelligent discussion of the important facts to be considered in contemplating, financing, locating and building of a chemical plant. Many interesting facts are given, such as, the average unit capital investment in chemical plants as compared with other industries, and the capital ratio of chemical plants compared with other industries. Many interesting graphs and maps are given.

Carbon Tetrachloride has been rejected for use with steel solvent extraction apparatus because of its marked tendency to hydrolyze. It has been recommended that the hydrochloric acid can be neutralized by the addition of a small amount of hydrated lime in the bottom of the still but this is evidently impossible to do in the distillation of the solvent from vegetable oils.—Journal of Oil and Fat Industries.

[News and Markets Section]

Chemical Exports Up 8 Per Cent

Year 1926 Shows Progress—Disinfectant and Insecticide Group Mainly Responsible—Fertilizer Tonnage Down 4 Per Cent, Value Up 18 Per Cent

(Special to CHEMICAL MARKETS)

Washington, D. C., Feb. 9-While many industrial chemicals reflected a slightly downward tendency during the year, the total exports enlarged 8 per cent to \$31,-478,000. This increase was made in all probability in disinfectant and insecticide classes and in foreign sales of specialties. In 1925, these were included in "all other industrial chemicals except medicinal and pharmaceutical preparations." In 1926, the class of "disinfectants, insecticides, fungicides, and similar preparations and materials" was removed from this class and exports recorded separately attained a value of \$2,722,000. Nevertheless the "all other" class advanced over \$300,000 from \$9,074,000 (82,388,400 pounds) to \$9.379,400 (95,218,000 pounds). Many firms are merchandising under popular brands such specialties as cleaning compounds, and boiler compounds, which are largely composed of sodas, especially sodium carbonate. Although some of these specialties may be included under the sodium compounds, probably the greater share is in the "all other"

Of the various classes making up the \$124,836,000 of Group 8, "Chemicals and Allied Products," exported in 1926, coal-tar products valued at \$14,100,000, showed the most significant change with a 31 per cent gain. Improvement was made in the exports of benzol, with more than double the quantity or 143,528,-000 pounds, and treble the value, or \$5,513,000. Coal-tar pitch also contributed to the extension in the trade, but since the amounts exported are rather small any increase would show a large rate. Coal tar dves held to about the same level in quantities shipped with an expansion of less than one per cent, but dropped 11 per cent in values, figures for the current year having been 25,812,000 pounds and \$5,950,-

Pigments, paints, and varnishes, after increasing 60 per cent from 1922 to 1925, exports in 1926 remained about the same with total values 2 per cent more than 1925, and equalling \$18,887,000.

A higher price characterized the fertilizer trade with quantities having declined 4 per cent from 1,142,400 tons in 1925 to 1,095,900 tons in 1926, while values advanced 14 per cent from \$17,298,500 to \$19,672,-300. In spite of keen competition from Germany, American manufacturers have been able to increase their exports of ammonium sulfate until during the year just closed, total foreign sales exceeded all previous years' figures and equalled 174,000 tons, valued at \$9,456,000.

Contrasting the increase in sales of ammonium sulfate, was the sharp decrease in phosphate rock with high grade hard rock having gone from

WHY THE JOBBER?

In a recent issue, a jobber told why he should exist. In a coming issue, a sales manager of a large chemical manufacturer will tell the manufacturer's feeling toward the existence of a jobber.

159,000 tons, worth \$2,283,000 to 103,600 tons, valued at \$1,196,000; land pebble from \$3,287,400 (697,-900 tons) to \$3,155,800 (634,400 tons); and other phosphate rock from \$107,300 (13,300 tons) to \$88,-600 (11,200 tons). Foreign demand for superphosphates remained about the same with 64,000 tons, \$932,800 while prepared fertilizer mixtures were also off about 10 per cent in quantity \$1,025,000 (27,000 tons) having left the United States in 1926.

The really encouraging factor of the fertilizer trade occurred in the "other fertilizer" class when over half as much again or a total of \$3,-251,700 (71,600 tons) was exported in 1926. This expansion is further proof of the fact that when an American exporter decides to really get more foreign business he can do so, inasmuch as the increase represents sales of a combined ammonium-phosphate material for use as a fertilizer, which must meet competition from other materials.

As an indirect result of the British coal-strike, exports of crude benzol were largely responsible for the 31 per cent rise in coal-tar values. Industrial chemicals showed an 8 per cent improvement, but since the majority of the individual chemicals included in this group were somewhat less than the previous year, probably the gain with the exception of sodas was in the disinfectant, and insecticide group, but comparable annual figures are not available. Paints were 2 per cent higher and fertilizers 14 per cent, yet the gain in this latter commodity was due primarily to prices likewise since quantities shipped were 4 per cent lower. Explosives were smaller, while the soap group advanced 4 per

Rosin exports declined 7 per cent in quantities from 1,172,000 barrels in 1925 to 1,094,000 barrels in 1926, but rose 30 per cent in values from \$18,889,000, to \$24,633,000. Germany, England, Brazil, Japan, Argentina, and the Dutch East Indies were the largest customers for rosin in the order named. Like the wood rosin, foreign sales of wood turpentine have been climbing, but the progress is slow.

Sulfur exports of 677,000 tons were 8 per cent under the 1926 figure although the values were only 0.7 per cent below and equalled \$10,-918,400. Pyroxylin in sheets, rods, or tubes were 17 per cent smaller in 1926 and amounted to \$1,733,400 (2,-345,300 pounds). Other miscellaneous commodities also were less; bones, hoofs, and horns, unmanufactured, amounting to \$78,700 (1,-996,500 pounds); animal glue, to \$381,200 (2,463,000 pounds); linseed oil to \$250,800 (2,567,000 pounds); logwood extract to \$204,100 (1,862,-300 pounds); other natural dye extracts, \$138,400 (666,500 pounds); and matches to \$103,000 (583,000

Alex Fergusson, Jr., Philadelphia, has bought buildings 21 and 23 S. Orianna st. for warehouse space.

Benzol sales by Ford Motor Co. in 1926 from its Iron Mountain plant amounted to \$2,000,000.

Peter Dirr, of Charles L. Huisking, Inc., has been a drug broker at 5 Platt st., New York, for 25 years.

GERMANY'S NITROGEN

(Special to CHEMICAL MARKETS)

Washington, D. C., Feb. 9-In the fertilizer year ended April 30, 1926. German agriculture consumed 330,-000 tons fixed nitrogen, while chemical industries took another 20,000 tons. The latter consumption has been approximately halved since pre-war, due to the curtailed activities of powder and explosives plants. The German supply of nitrogen is exclusively from local production, Germany having become better than self-contained as a result of the World War. Out of a production of one-half million tons of fixed nitrogen in 1926, about 70 per cent was produced by Haber Bosch process of direct ammonia synthesis at Merseburg and Oppau, and about 15 per cent each by local calcium cyanamide and coke and gas plants. Actual export surpluses in 1926 were nearer 150,000 tons than 200,000 tons, but it is expected that the latter figure will be reached if not surpassed during 1927.

"The nitrogen industry," Dr. Julius Bueb, head of the German Nitrogen Syndicate, says, "comprehends much more than the production of nitrogen fertilizers. The effort of the nitrogen industry is to bring about cheaper prices by continually increasing production. This can only be accomplished successfully if disturbances from outside are kept away from the development of this important German industry."

Poison gas is being used to kill vermin in German railway coaches in a new disinfecting plant at Potsdam. Under the Versailles Treaty, the manufacture of deadly gases is forbidden. A Hamburg bank has protected its vaults with a deadly gas, which is released as soon as the locks are tampered with and which also can be sprayed on gunmen from the cashier's window.

Final action on Muscle Shoals legislation at this session seems doubtful. Senator Norris, Republican, leader of the Government operation group; Senator Deneen, Republican, sponsor of the Associated Power Companies' bid, and Senator Heflin, Democrat, who favors American Cyanamid Co.'s proposal, have been unable to agree on any plan for a vote.

Ferdinand Wilckes, president of Wilckes-Martin-Wilckes Co., New York, sailed on Jan. 29, on a South American cruise to be gone until April 1. He will visit Cuba, Panama, Peru, Bolivia, Chile, Straits of Magellan, Uruguay, Argentina Republic, Paraguay, Brazil, Trinidad and Porto Rico.

January Dye Imports 196,620 Pounds

Rhodamine B Extra, Single Strength Took the Lead in Quantity and Amounted to 8,300 Pounds—Value of January Imports \$186,387—Synthetic Aromatic Chemical Imports 6,278 Pounds, Value \$7,634—Medicinals Imported 99,866 Pounds, Value \$81,638—Germany Source of 37 Per Cent of Imports, Switzerland 34 Per Cent

(Special 10 CHEMICAL MARKETS)
Washington, Feb. 9—Imports for consumption through New York and other ports of the United States for January, 1927, of coal-tar dyes

were as follows:

New York, 187,074 pounds, valued at \$173,832; Boston, 9,546 pounds, value, \$12,555; total, 196,620 pounds, value, \$186,387. The five leading dyes, by quantity, imported during January, were Rhodamine B extra (single strength), 8,300 pounds; Anthra yellow GC (single strength), 6,149 pounds; Erioglaucine, 6,063 pounds; Thionol green B, 5,779 pounds; Gallamine blue extra paste, 5,004 pounds.

Dyes and intermediates remaining in bonded customs warehouse at the close of each month in 1926 were:

Dyes and Colors—July 31, 512,-186 pounds; August 31, 557,852 pounds; September 30, 395,535 pounds; October 31, 281,320 pounds; Nov. 30, 303,321 pounds; Dec. 31, 303,321 pounds.

Intermediates—July 31, 781,796 pounds; Aug. 31, 690,031 pounds; Sept. 30, 590,520 pounds; Oct. 31, 557,257 pounds; Nov. 30, 539,561 pounds; Dec. 31, 539,561 pounds.

The per cent of Dyes by country of shipment was as follows: Germany, 37 per cent; Switzerland, 34 per cent; Belgium, 11 per cent; England, 7 per cent; France, 7 per cent; Italy, 3 per cent; Canada, 1 per cent.

The total imports of synthetic aromatic chemicals for January were 6,298 pounds, with invoice value of \$7,634. Total imports of medicinals, intermediates, photographic developers and other coal-tar products for January were 99,866 pounds with an invoice value of \$81,638. Imports of color lakes for January totaled 1,000 pounds, with invoice value of \$731. The statistics were compiled by the chemical divisions of Bureau of Foreign and Domestic Commerce and U. S. Tariff Commission.

U. S. Industrial Alcohol Co. has moved offices and warehouses to 800 N. Delaware ave., at Poplar st., Philadelphia. The company will carry stocks of alcohol, alcohol chemicals and methanol, the products of U. S. Industrial Chemical Co., Wood Products Co., as well as their own. The announcement says the change is made to care for increase in business and better to serve customers.

ZINSSER AND NIEMAN ADDRESS SALESMEN

Sixty members of Salesmen's Ass'n. of the American Chemical Industry listened to addresses by Wm. Zinsser of Wm. Zinsser & Co. on "Sanctity of Contracts" and by Howard S. Nieman, secretary, Ass'n. of Textile Colorists and Chemists on "Purchasing Agents" at the monthly meeting of the Association at the Machinery Club, New York, Friday evening, Feb. 4. William Thompson, president, presided at the meeting which consisted of a dinner and vaudeville entertainment in addition to the speakers.

Mr. Zinsser's address was a resume of an article by him appearing in a recent issue of CHEM-ICAL MARKETS. The theme of his talk dwelt on the practice of a small group of buyers who refused to take delivery of shipments on contract when the existing market is below the price stipulated in the contract. He told of the work being done by his organization in combating this custom and appealed to the salesmen to be more careful in impressing on the buyer at the time of the sale that "a contract is a contract' under any circumstances.

Mr. Nieman's talk on "Purchasing Agents" was in much the same vein. He pointed out that the present day tendency of the buyer to purchase on price was in a large measure due to the attitude of the salesmen of today, who are more interested in learning what their competitors are quoting so that they may "shade" this price, rather than impressing the purchasing agent with the quality of their own product.

Oil Trades Association of New York held its annual banquet at Hotel Waldorf-Astoria, Feb. 9. The speaker was Justice Arthur S. Tompkins, of New York State Supreme Court.

Minstrels and a dance are planned by New York Produce Exchange members April 1, at Waldorf-Astoria Hotel. Fifty members have volunteered.

Flint Paint & Varnish Co., Ltd., Toronto, Canada, announced plans for a new factory, during a concert and dance, Jan. 21. The plant will be in operation early in 1928.

COTTONSEED OIL LEADS

Factory production of fats and oils (exclusive of refined oils and derivatives) during the three-month period ended Dec. 31, was: Vegetable oils, 1,165,895,148 pounds; fish oils, 24,080,433 pounds; animal fats, 499.116.767 pounds; and grease, 95,-066,473 pounds; total 1,784,158,826 pounds. Of the several kinds of fats and oils, the greatest production, 851,637,570 pounds, appears for cottonseed oil. Next in order is lard with 372,447,996 pounds; linseed oil with 206,496,045 pounds; tallow with 123,974,727 pounds; coconut oil with 64,570,430 pounds and corn oil with 27,854,486 pounds.

Production of refined oils during the period was: Cottonseed, 679,-873,670 pounds; coconut, 59,020,026 pounds; peanut, 1,605,631 pounds; corn, 18,487,216 pounds; soya-bean, 577,110 pounds; and palm-kernel, 65,781 pounds. The quantity of crude oil used in the production of each of these refined oils is included in the figures of crude consumed.

HANKOW OIL PRICES

(Special to CHEMICAL MARKETS) Washington, D. C., Feb. Prices of Chinawood oil at Hankow, China, remained 21.80 taels per picul (\$0.117 per pound) until Jan. 15 with no February oil offering, raising to 22.20 taels (\$0.12 per pound) on Jan. 20 for both February-March offerings and to 22.60 taels (\$0.119 per pound) on Jan. 25, closing the month at 22.40 taels (\$0.124 per pound), says a cable from Consul General Frank P. Lockhart, Hankow. The Hankow tael for the above dates was quoted at \$0.626, \$0.64, \$0.636, and \$0.66.

There is plenty of oil available at Wanshien but transportation conditions are not satisfactory either up or down the river. Shipments from Hankow for the month of January totaled 6,996,605 pounds of which 4,998,455 pounds were shipped to United States and 1,998,150 pounds to Europe. Imports of wood oil into the United States during the month of December totaled 7,572,987 pounds, valued at \$820,762, compared with 8,606,485 pounds in December, 1925.

Spencer Kellogg & Sons, who suffered heavy losses of linseed oil at their Edgewater plant, N. J., caused the arrest of two employees who were discovered transferring 5-gallon cans from a tank truck to a moving van near the Hackensack plank road. The men were held in \$1,000 bail each.

Henry Howard, of Grasselli Chemical Co., Cleveland, is making a six months' cruise in Southern waters.

Cottonseed Oil Appears Weak

The following market letter and chart by W. A. Storts of Edward Flash Co., are a resume of the cottonseed oil position for January.

January 27, 1927.

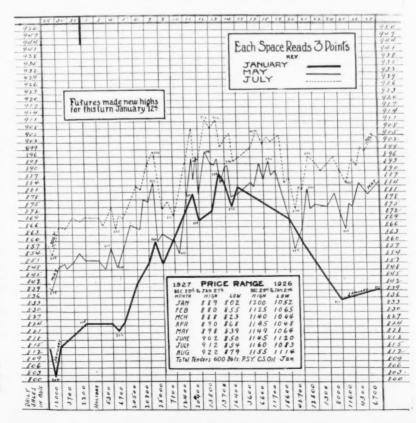
The Census report, January 17, indicated consumption 325,000 bbls. Refined Oil for December, little more than previous December, but not up to general expectations, considering low prices recently prevailing. There were also 835,000 tons of Seed received at mills during December, although there was a cry during the entire month from various interests that the Seed receipts would be very light. The consumption of Refined Oil for five months this season, ending December 31st, was 200,000 bbls. less than for the same period previous season, and the visible supply, January 1st, Seed, Crude and Refined, reduced to Refined basis, was the heaviest ever recorded, being over two million barrels and about 500,000 bbls. more than the visible, January 1st, 1926. It seems assured that the actual Cotton ginnings will amount to 171/2 million bales and that the total Seed receipts for the season will run over six million tons, but, even in view of these bearish features, the market has shown surprisingly good undertone and has scored recently a

fair advance, Crude Oil selling today in all sections 7c f.o.b. mill.

The recent advance is unquestionably eliminating probability of liberal sales of Cotton Oil either for Export or to the Soap manufacturer, as the latter is able to buy Tallow at 7½c delivered, which is just about the price of Crude Oil, plus freight, and Oriental Oils have shown very little strength over the recent lows.

"Future" market has been rather a stationary affair for the last several weeks, with minor fluctuations, and similar situation will probably continue for some time. Personally, we believe present levels discount all bullish conditions and feel that the sale of May-July Oil, at present levels or on further advance; will eventually result satisfactorily.

All of these things are, of course, accumulative in effect, and, unless consumption of Cotton Oil increases very greatly, as we go through the Spring and Summer, present prices we hardly believe will hold, even if there should be first a further advance. At present rate of consumption, we have prospects of about the heaviest carryover August 1st ever known, and, of course, the price will be influenced very strongly by crop prospects, Lard situation and Inedible Fat prices.



The Industry's Finances

TEXAS GULF SULPHUR EARNED \$3.69

Net Income after Taxes, Was \$9,383,813 Compared With \$5,689,241 in 1925 -Four Distributions to Stockholders Made in 1926-Profits Show Large Increase, and Company Has More Working Capital-Increase in Capital Shares

Texas Gulf Sulphur Co., Inc., reports for the year ended Dec. 31, net income \$9,383,813 after costs, expenses and accrued Federal taxes, equivalent to \$3.69 a share on 2,-540,000 no par capital shares outstanding. This compares with \$5,-689,241 or \$2.24 a share on the same capital share basis or \$8.96 a share on the 635,000 capital shares outstanding in the preceding year. Net income for the quarter ended Dec. 31, 1926, was \$3,061, 03 or \$1.20 a share, compared with \$1,515,018 or 59c a share on the same share basis in the corresponding quarter of 1925, or \$2.39 a share on the capital shares then outstanding. On Sept. 22, 1926, the company's capital stock was changed from 635,000 shares of the par value of \$10 each to 2,540,000 no par shares.

Accompanying the annual statement of earnings, the company included a table showing what proportion of the year's dividends was paid from free surplus and the amount charged against depletion reserve, the latter of course being tax free. The statement said: "During the year 1926, the company paid four distributions to its stockholders, which distributions came from free surplus and reserve for deple-

These proportions are based on the present Federal income tax laws and if changes in the laws

Foreign Exchange

	Par	Current
Great Britain (pound sterling)	4.866	4.85
France (franc)	.193	.039
Italy (lira)	.193	.043
Belgium (franc)	.198	.139
Denmark (krone)	.268	.267
Czechoslovakia (crown per 100	20.30	2.96
Holland (florin)	.400	.400
Poland (zloty)	.193	.120
Norway (krone)	.258	.257
Spain (peseta)	.193	.166
Sweden (krone)	.268	.267
Switzerland (franc)	.193	.192
Argentina (peso)	.414	.414
Brazil (milreis)	.324	.119
Japan (yen)	.499	.487
India (rupee)	.485	.363
China (Silver dollar, Hongkong)	.789	.516
Tael-Peking, silver)	1.146	.703
(Hael-Shanghai, silver).	1,986	.656

affect these properties, stockholders will be advised.

The company is advised that the distributions from depletion reserve are, under the Federal revenue laws, to be treated as capital distributions.

FREEPORT TEXAS NET

Report of Freeport Texas Co. for year ended November 30, 1926, shows net profit of \$1,809,040 after expenses and reserves for depreciation, taxes, etc., equivalent to \$2.47 a share earned on 729,844 shares of no par stock. This compares with \$750,309 or \$1.02 a share in previous year. Consolidated income account for year ended November 30, 1926, compares as follows:

Gross sales Costs and expense	1926 \$9,422,898 es 7,326,696	1925 \$7,227,877 6,133,664
Operating profit Other income		\$1,094,213 64,474
Total income Tax reserves Depreciation reserv	110,511	\$1,158,687 140,861 267,517
Net profit		\$750,309 5,423,428

Norman W. Wilson, president, American Paper and Pulp Association, says the industry increased its output by ten per cent in 1926, and now ranks seventh in the country's billion-dollars a year industries.

Tariff rates have been fixed by U. S. Customs Court on acetone oil imported by M. de Mattia Chemicals, Inc.; and aniline dyes imported by Wetterwold & Pfister

Net earnings of Fleischmann Co. in 1926, after all charges and taxes, are estimated at more than \$4 a share on 4,500,000 outstanding shares. Actual earnings in 1925 were \$3.08 a share on common,

J. Louis Schaefer, former president, Grace National Bank and vice president and treasurer of W. R. Grace & Co., died last week.

Artificial Wool Corp., New York, has changed its name to Chem. Wool Corp.

COMMERCIAL SOLVENTS

"Commercial Solvents Corp.'s operations during 1926," says P. S. Mumford, president, in a statement to stockholders, "continued on a satisfactory basis." Work on plants will be completed in March, costing \$3,000,000, of which \$2,000,000 has been expended. Earnings per share were \$14.58 per share of class B stock, aganst \$13.81 for 1925.

Allyn K. Thayer, formerly sales manager St. Louis Lithopone Co., St. Louis, Mo., before its purchase by Glidden Co.; is now with Monsanto Chemical Works. Mr. Thayer represented Kentucky Color & Chemical Co. in Chicago territory and was at one time with Sherwin-Williams Co.

Sodium silicofluoride report is pending before the Advisory Board of Tariff Commission and when approved by the commission a hearing will be held. Chemical Division experts have nearly completed statements of information for barium carbonate and glue.

William Cooper Procter, president Procter & Gamble Co., was elected a director of New York Central Railroad. Election of Mr. Procter is in line with the policy of placing representatives of commercial interests on railroad boards.

W. S. Benson, formerly president and manager of Mobile Paint Manufacturing Co., has resigned, and with P. K. Beckmann and George C. Beckmann has organized Benson-Beckmann Paint Co., capitalized at \$150,000.

Rio Tinto Co. (Ltd.), ordinary shares 375,000 par value £5 and 325,000 shares 5 per cent preference stock, par value £5 have been admitted for trading on the Curb Exchange, New York.

United Wall Paper & Paint Co., Erie, Pa., has purchased the property at 14 S. Main st., Erie, for \$45,000 and will move to the new site as soon as improvements can be completed.

Chemists Club's nominating committee comprises Ellwood Hendrick, E. D. Kingsley, M. C. Whitaker, just appointed by Board of Trustees for coming election.

Grasselli Powder Co., Cleveland, has bought 900 acres in Grundy county, Ill., and will build a factory estimated to cost \$500,000.

Stocks & Bonds

L.				_			
	1926		1927		Curre		Ann.
	High	Low	High	Low	Bid	Asked	Div.
*Air Reduction	146%	1071/2	141	137	137	1381/2	5
*Allied Chem	148%	106	13914	131	138	1381/4	6
*Allied Chem pfd	122%	11834	1211/2	1201/2	1201/2	1211/2	7
Am Ag Chem	34%	9	14	12	123/4	13	
*Am Ag Chem pfd	961/3	35%	5134	451/8	46	48	
*Am Can	63 1/8	38 7/8	491/4	45%	4634	47	2
*Am Can ofd	130 1/9	121	1291/9	126	127%	1281/6	7
*Am Cyan "A" *Am Cyan "B"	46	36 1/8	40	32	35	40	
*Am Cyan "B"	47	351/4	35	32	34	35	
*Am Linseed	52 1/8	25 %	301/2	2014	201/2	20%	
*Am Linseed pfd	87	68%	711/8	54	54	541/2	
*Am Metals	57%	421/4	44	411/2	42%	4234	4
*Am Metals pfd	120	113 1/2	112	107	110	112	7
Am. Rayon Prod	353/4	29%	35%	29%		* * *	
*Am Smelting	152	109%	143%	132%	141	1411/2	8
*Am Smelting pfd	122%	112 %	121	119	1201/4	121	7
*Am Zinc	121/8	51/8	10	81/2	9	914	
*Am Zine pfd	541/2	20	481/2	42	471/2	48	
Anglo Chil. Nitrate	101	971/2	100 1/8	951/4	951/2	* * * *	
*Archer-Dan-Mid	34 1/8	36	42	40	41	411/2	3
*Archer-Dan-Mid pfd	108	100	108	105	106	107%	7
*Armour Del pfd	97 1/8	901/4	97	91	951/2	96	7
*Atlas Powder	64	54	63	58	62	601/2	4
*Atlas Powder pfd	97%	96	100	98	991/2	100	6
*Brooklyn Un Gas	98	68	93 %	89 %	921/4	921/2	4
*By-Products Co	93	53	72	66	71	72	2
*By-Products Co. pfd	* * *		108	105	108	***	9
*Calla L & Z	2 5%	11/2	2 %	11/2	1 1/8	2	2
Canad. Ind.	20	161/4	16 %	14	16 1/8	:::	
Canad. Salt	145	131	115	105	105	115	1
Casein Co	***		154	149	149	154	6
Celluloid Corp	26	15	20	16	18	20	
Celluloid Corp. pfd	68	55	70	63	65	70	
*Certainteed Prod	491/2	361/8	4434	42	441/2	44 %	4
Charcoal Iron	331/2	24	20	8	10	20	
Chesebro Mfg. Co	78	65	78	73	751/2	78	
Clark Co. Fred	5	284	4	2	21/2	4	
Cleve Cliff Iron	75	691/2	75	69	70	75	
*Columb Carbon	7034	55%	821/2	66 %	80	811/4	4
*Com Sol B	237	1181/4	255	223	2401/4	241	8
Cont Can	921/2	70	73 1/2	691/2	70 3/4	71 1/4	5
*Cont Can pfd	126	1171/2	125	120	123	124	7
*Corn Prod	51 %	35%	49 %	46 %	481/2	49	21/2
*Corn Prod pfd	1301/4	1221/2	130	128	128	1291/2	7
*Davison Chem	4634	271/8	31%	271/8	281/4	28 1/8	7
*Davison Chem. pfd			431/2	43	431/2	431/2	
*Devoe & Rayn A	104 1/8	31	42 %	37%	40	41	2.40
*Devoe & Rayn B	105	40	105	103	1021/4	104	
*DuPont deb	1101/8	100%	109%	109	105	106%	6
*DuPont de Nem	1811/2	157	1781/2	168	176	1771/4	7
*Eastman Kodak	13634	106%	1341/2	1261/4	129	1291/2	8
*Freeport Texas	36	195%	43	34	41 %	42	2
*Gen Asphalt	941/4	50	87%	771/2	851/4	851/2	
*Gen Asphalt pfd	130	94 %	130	126	127	130	
•Glidden	25 %	15%	2134	181/2	191/4	191/2	2
*Gold Dust	561/2	411/2	461/4	421/2	46	461/4	
Grasselli	145	120	130	125	125	130	8
Grasselli. pfd	1031/2	102	103	100	101	103	6
Hercules Powd. pfd	115	110	118	115	116	118	7
•Household Prod	48%	40	491/8	431/4	481/4	4834	31/
Industrial Rayon	19 %	101/2	7	5	61/2	7	
*Int Agr	267/4	91/8	10%	8 1/2	91/4	934	
*Intl Agr pfd	95	57	64	60	62	64	7
•Int Nickel	46 1/4	32%	43 %	381/4	41	411/4	2
*Intl Salt	84 %	61 1/2	72	65	66	71	6
MacAnd & Forbes	461/4	40	411/2	40	66	71	
*Mathieson Alk	106 1/8	621/2	87%	82	86	871/2	4
*Mathleson Alk pfd	105	100	105	103	1001/2	106	7
Merck & Co		*	69	65	66	69	
Merrimac	83	72	80	73	75	80	10
•Natl Dist	34	121/2	201/2	19	20	201/2	
•Natl Dist pfd	731/2	57	477%	431/8	4314	44	
*Natl Lead	181	138	168	160	166	168	8
•Natl Lead pfd	120	116	1181/2	117	1171/2	118	7
N J Zinc	2141/2	180	206	202	203	206	
Niag A pfd	00.8/	FO.W/		***	80	85	
Owens Bottle	90 %	53 %	80 1/8	7516	8034	81	5
Penn Salt	91	71	77	74	76	77	5
• Peoples Gas Chi	131	117	129	126	12814	1291/2	8
Proc. & Gam	163	1421/2	159	157	159	***	-
Royal Bak Pdr	213	190	169	161	163	168	8
Royal Bak Pdr pfd	1051/2	102	102	99	100	102	6
Shawinigan	191	1671/2	170	168	170	100.04	
*Sherwin-Williams	108	108	109	105 78	1081/4	10834	-
*St. Joseph Lead	481/9	365%	42%	41	41	41 %	3
Silica Gel	22%	11 %	171/2	16	171/2		
Swan & Finch pfd	110	110	30	20	20	30	
•Swift & Co	110	110	1473/4	146	1171/2	147%	
Term C & C	16	10 %	1314	10 %	111/2	11%	1
•Texas Gulf & S	142	1191/2	1751/2	173	175	1751/2	10
*Union Carbide	100 %	78	105%	9834	103	1031/2	6
*United Dye pfd	58	58	49	30	30	4834	
Un Gas Imp	1441/2	841/8	108	106	1061/2	108	
•U S Gypsum	166	126	110	107	1071/2	110	
*U S Ind Al	841/2	45%	82 34	771/8	79%	79%	5
*Ve Car 60% w 1	11476	901/4	109	107	109	112	7
"Va Car 6% w 1	69	31 %	3514	3274	34	341/4	
Will & Baumer	* * *		161/2	15	161/2	* * *	

Contracts Awarded

Bid of Fumigators Supply Co., Washington, on call of Treasury Department for 4,500 lbs. liquid HCN and CNCL was \$3,780.

Grasselli Chemical Co.'s bid on 1,250 lbs, sodium chlorate for Treasury Department was \$87.50 f.o.b, Rosebank, N. J.

E Z. Chemical Products Co., bid \$99 on Treasury Department's call for 22 bbls, sweeping compound.

Sunlight Chemical Co., Providence, R. I., offered to furnish Treasury Department with 72 cases chloride of lime, at \$3.60 per case.

Lightnin' Lye Co. bid \$3.04 per case for 163 cases of lye for Treasury Department.

E. I. du Pont de Nemours & Co. will supply Naval Aircraft Factory, Navy Yard, Philadelphia, with 300 gallons dope-proof paint at \$1.47 per gallon.

Titanine, Inc., of Union, Union County, N. J., has been awarded a contract for 10 gallons nitrate dope thinner for Naval Aircraft Factory, Navy Yard, Philadelphia, at \$1.09 per gallon.

F. J. Lewis Mfg. Co., Chicago, received an award for 6,840 lbs. naphthalene at 6.6c, for Ft. Sam Houston.

Wishnick-Tumpeer, Inc., New York, will supply Picatinny Arsenal with 1,800 lbs. sulfur roll, at \$54.

Roessler & Hasslacher Chemical Co., New York, will supply Picatinny Arsenal with 23,100 lbs. barium nitrate, at 8.75c.

Pyrene Mfg. Co. will supply 1,000 hand-operated chemical fire extinguishers to Postoffice Department, Washington, at \$3.50 each.

E. I. du Pont de Nemours & Co. have received an award to supply 3,000 lbs. white lead, at 11.23c for Chanute Field.

Bid of Nickel Plate Stove Polish Co., Chicago, for 18,000 cans paste metal polish, at 11c per can, has been accepted by the Quartermaster of Marine Corps, Philadelphia.

Wing & Evans Co. will supply New York G. I. D., Brooklyn, with 30,000 pounds washing soda, at 18c. at 1.8c.

[Industrial Chemicals]

BUTYL ALCOHOL LOWER; DENATURED WEAK

General List Firm—Copper Sulfate Very Firm—Barium Chloride Steady
—Zinc Chloride Competition Reported—Prussiates Firm at Advance
—Phosphates and Bichromates in Increasing Demand

Advanced No Advances.	Ale	cohol, Butyl,	Declir	Glycerin,	1e lb.	
Acetic Acid, Glacial, e-l D	Today		Month .11%		War Peak .19½ 55.00	Pre- War 20.00
Sulfuric Acid, Tanks 66°ton Amm. Sulfate c-1 NY100lbs. Bleaching Powder, c-1100lbs Copper Sulfate c-1 NY100lbs	15.00 2.50 2.00 4.75	4.75	15.00 2.50 2.00 4.75	14.00 2.95 2.00 4.30	7.50 9.50 20.00	2.65 1.50 4.60
Potash Caustie e-l Imp Ib Soda Ash, 58 p.e. e-l100lbs Caustie Soda, 76 p.e. e-l 100lbe Potassium Bichromatelb	.071/6 1.94 3.66 .081/4	1.94			9.50 4.65	.08 .60 1.42 .06
Sodium Prussiate	3.012	3.012	3.012	.10 2.918	1.25	.18 2.99

Current Quotations and Comments on Specific Items, Pages 226-236

Demand for industrial chemicals has been of good volume during the past month. Prices on the average have been well maintained, although some weak spots have developed. Alcohol has been exceedingly weak due to the continued mild weather and prices are being shaded quite generally. Ammonia remains sharply competitive although there has been no definite change in the situation. Glycerin displays an easier tendency and prices on all grades are lower with no immediate strengthening in sight. Butyl alcohol is 1/4c to lower.

Trade in alkalies has been of good volume but prices have been shaded on many occasions. While this has not come to the surface in the general market, the prices at which some Government and Municipal bids have been taken indicate that soda ash at least is in plentiful supply. Reports from other parts of the country indicate that less carlot sales of alkalies are being made at just a trifle advance over carlot prices.

Copper sulfate has now maintained a steady tone for several months and at present prices remains at unchanged figures with absolutely no cutting of the schedule found. The use of this material as a flotation reagent has been largely responsible for the strength of the market. Barium chloride is moving freely at fairly firm prices from makers and importers. Sodium prussiate is firm in all directions at the recent advance to 12c lb, and de-

mand is steady. Domestic makers are practically the only source of this material.

Domestic factors in zinc chloride report the loss of some business to one of the large smelting concerns that is now offering this material for wood preservation and is obtaining many carlot consumers. Sodium sulfide is quite firm. Phosphates are unchanged as to price or position. Imported di-sodium phosphate is still meeting with competition from imported material, but makers are able to move their production without generally cutting their schedules. Demand for tri-sodium phosphate continues to expand but alkali makers have been pushing soda ash into the place of tri-sodium phosphate in many cases.

Buying generally has been good but quiet and lacking snap as it has

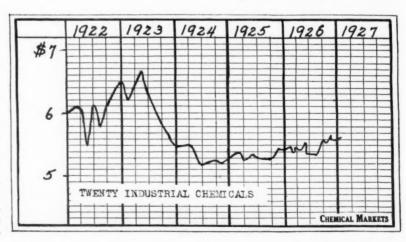
for the past several years. Makers generally state that the volume of sales at the end of the month adds up to a suitable total, although it is hard to realize during the month that the volume is there. Consuming centers of the country are shifting and manufacturers of textile chemicals report a distinct loss of demand from New England, and a consequent increase in demand from the South.

POTASH HIGH IN HAMBURG

(Special to CHEMICAL MARKETS)

Hamburg, Germany, Jan. 15-Owing to higher prices of potash, speculators are gambling again in potash alum, caustic potash, etc. Bromides which had been neglected are in fair demand. Export business has also revived. Orders from the Far East are missing, especially from China, and the political situation in that country makes business difficult. The trouble in Mexico has also influenced trade here and shippers received cables from their Mexican houses to delay all shipments. Quotations are f.o.b. Hamburg (prices quoted in pounds sterling per 1,000 kilos and prices in dollars per 100 kilos), are as fol-

Caustic Potash, \$13; Sulfate of Alumina, 14-15%, £4 17s 6d; Sulfate of Alumina, 17-18%, £5 15s; Hyposulfite of Soda commercial cryst., £6 12s 6d; Barium Carbonate, \$2.85; Barium Chloride, \$3.65; Epsom Salts commercial, \$1.10; Borax powdered, £20; Ammonium Bromide, \$80.50; Potassium Bromide, \$70; Sodium Bromide, \$75; Calcium Chloride fused 70-75%, £3 7s 6d; Glaubersalts small Cryst., \$1.02; Potash Alum granular, £6 9s; Chlorate of Potash, \$11.60; Yellow Prussiate of Potash, £63; Permanganate of Potash, £37; Blue Vitriol, £20 13s; Sal Ammoniac, \$8.35; Sodium Sulfide, 60-62% fused, £8 9s.



Ethylene Dichloride— A Low-priced Chlorinated Solvent

AS A result of increased manufacturing facilities the Carbide and Carbon Chemicals Corporation is pleased to announce a substantial reduction in the price of ethylene dichloride.

On a volume basis these new low prices make the use of ethylene dichloride as a solvent especially attractive. The high solvent value and great stability of the compound adapt it particularly to the following fields:

- (a) The extraction of vegetable oils from seeds.
- (b) The degreasing of wool, furs, leather, etc.
- (c) Spot-removing compound for fabrics.
- (d) The cleaning of metals.
- (e) Liquid soaps.
- (f) Dry cleaning.

In addition to these uses a mixture of ethylene dichloride and alcohol or Cello Solve (the mono ethyl ether of ethylene glycol) is an excellent solvent for cellulose acetate.

Further information on any of the applications above may be obtained from our Technical Department.

CARBIDE AND CARBON CHEMICALS CORPORATION
30 East Forty-second Street, New York, N. Y.

Unit of Union Carbide and Carbon Corporation

[Crudes & Intermediates]

BENZENE, SOLVENT NAPHTHA AND XYLENE EASY

Price Shading in Some Quarters on All Three Products—Toluene is Very Strong and the Heavy Movement is Responsible for Large Supplies of Xylene and Solvent Naphtha—Cresylic Acid and Naphthalene Firm—Intermediates Unchanged in Prices—Demand Remains Spasmodic—Sharp Competition Continues in Dyestuffs

Advanced No Advances.	_			No Declin		
	Trend	of the Market Two Weeks Ago	Last Month	Last Year	War Peak	Pre- War
Benzene, pure tanks wksgal	.23	.23	.24	.23	1.10	.25
Naphthalene flake	.041/2	.05	.05	.06	.16	.03
Phenol Spot	.18	.18	.18	.22	1.50	.08
Toluene tanks wksgal	.35	.35	.35	.35		
Aniline Oil lc-l	.15	.15	.15	.16	1.40	.103
Alpha-naphthylamine D	.35	.35	.35	.35	1.28	_
Benzaldehyde	.70	.70	.70	.70	_	-
Betanaphthol bbls	.24	.24	.24	.24	1.50	.08
Dimethylaniline c-l	.32	.32	.32	.31	1.30	
Paramitroaniline bblslb	.52	.52	.52	.50	1.58	.18
Average.	3.09	3.09	3.10	0.312		

Current Quotations and Comments on Specific Items, Pages 226-236

Toluene remains the only light oil distillate in a strong position. Supplies are exceedingly tight and prices are very firm. Benzene is still weak in tone with supplies freely offered at current prices. Shading of the 23c level has occurred on occasions but is not general. The heavy demand for toluene is bringing a sharp increase in production of solvent naphtha and commercial xylene with the demand for the latter products not expanding in proportion. Quoted prices of solvent naphtha and commercial xylene are unchanged, but many factors maintain that the prices being paid for the material are the prices that will move the materials. Of course these products can always be dumped into motor benzene and moved that way, so the markets are easily controlled, although prices obtained by this method are lower.

Pyridine is begging on spot and for shipment. Spot goods have sold at \$2.30 gal. for a single drum. Large consumers were sold with German material some months ago at \$2.25 gal. Shipment from England is quoted at \$2.25 openly but it is thought that as low as \$2.00 would be acceptable. Latest reports indicate that aldehol will be in production by April 1 without fail. Naphthalene is moving more freely with the approach of Spring. Cresylic acid is firm and moving in large volume. Imports from England have been heavy but the market has absorbed them readily.

Intermediates are quiet and without change. Makers report a continuance of the conditions that have existed for many years, namely, a week of very heavy demand and marked activity that causes them to think that conditions have changed back to war days, and then a sudden let-down with hardly any orders for another week or two. Prices are unchanged on practically all items, and price cutting has practically disappeared from the market for the moment.

Sharp price competition continues in dyestuffs, however, and the larger makers are said to be keenly after business and are unwilling to let any accounts slip away from them due to lower prices named by competitors. General practice among practically all makers is to meet any price named by a competitor in order to hold the account.

RAYON MERGER CONFIRMED

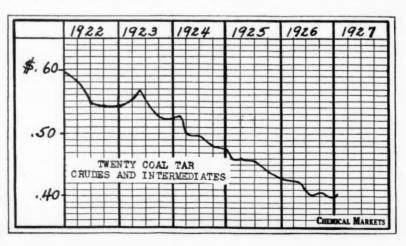
S. A. Salvage, president Viscose Co., largest American rayon producers, confirmed the reported working agreement between Courtaulds, Ltd., England, Snia-Viscosa of Italy and the Vereinigte Fabriken-Glanzstoff of Germany, when he arrived recently from England. Mr. Salvage declared that to the best of his knowledge all arrangements had been completed for the agreement. He denied having had a hand in the negotiations. He said it was a mere coincidence that the agreement should be arrived at during his trip.

The effect of the working agreement on the American rayon market is open to conjecture, he added. It may not influence conditions in this country at all. He held it was largely a European proposition brought on by over-production of rayon in England and France particularly. The prospects for the rayon industry both here and abroad are excellent for 1927, according to Mr. Salvage.

Baltimore Paint, Oil and Varnish Club held its annual ladies night Feb. 5 at Emerson Hotel. The club is beginning the Spring clean-up and paint campaign with street-car and outdoor advertising posters. Arthur S. Franklin, Pittsburgh Plate Glass Co., is chairman of the committee.

November exports of aniline oil and salts were 52,006 pounds, valued at \$7,792, and other intermediates 73,766 pounds, valued at \$20,825. Exports for November of coal tar colors, dyes and stains totaled 2,672,216 pounds valued at \$511,539.

Stockholders of Providence Dyeing, Bleaching & Calendering Co., Providence, R. I., authorized an issue of 6 per cent preferred stock to the amount of \$300,000. Wilfred Ward was elected president by the directors.







PARA-NITROTOLUENE

and

PARA-TOLUIDINE

Practical manufacturing experience has repeatedly proved that pure ingredients are required for the economical production of fine chemical products.

Para-Nitrotoluene and Para-Toluidine of good quality are needed for the synthesis of Dyes that are true to type and of good tinctorial strength, also for pharmaceuticals which will pass the United States Pharmacopæia requirements. Buyers of Du Pont Para-Nitrotoluene and Para-Toluidine are assured of deliveries that meet the most exacting quality standards. Ample stocks are always available for prompt shipment.

E. I. du Pont de Nemours & Co., Inc.

Dyestuffs Department, Sales Division

WILMINGTON DELAWARE

New York San Francisco Chicago

Oils and Fats

CHINAWOOD IN ALL POSITIONS AGAIN HIGHER

Sale of Spot Oil in Barrels Good-Tanks on the Coast Higher on Chinese Situation—Denatured Olive Oil and Foots Scarce and Higher—Refined and Crude Cotton Oil Higher and Steady—Japanese and English Rapeseed Up Sharply Here-Linseed Easy-Animal Oils Steady

Advanced

Cottonseed Oil, PSY spot, ½c lb. Chinawood Oil, spot bbls., 2c lb. Oilve Oil Foots, ship., ½c lb. Cottonseed Oil, crude mills, %c lb.Chinawood Oil, tanks Coast, 1½c lb. Rapeseed Oil, Japanese, 2c gal. Lard Oil, extra, 1c lb. Coconut Oil, Manila spot, ½c lb. Rapeseed Oil, English, 5c gal. Oilve Oil, denat., spot, 10c gal. Corn Oil, crude, ½c lb. Olive Oil Foots, ship., 1/4c lb.

> Declined 0leo Oil, No. 3, 1/4 c lb.

*	Trend	of the Market	t			
	Today	Two Weeks Ago	Last	Last Year	War Peak	Pre- War
Cod Oil N Ygal	.65	.65	.65	.63	1.20	.26 1/2
Degras American bbl	.04 14	.04 34	.04 1/4	.0454	.23	.03 1/4
Lard No. 1 gal	73	.73	.731/2	.93	2.90	.92
Menhaden, crude tanks gal	.4736	.473/2	.473/2	.55	1.20	.33
Neatsfoot 20° ctgal	1.15%	1.101/4	1.103/4	1.56	8.45	.95
Red Oil distilledlb	.10	.10	.10	.103/4	.17	.07
Stearic Acid, T. P	.151/4	.151/4	.151/4	.171/2	.38	.12
Coconut Ceylon tankslb	.08 %	.08	.08	.101/2	.30	.14
Cottonseed, crude tankslb	.07%	.061/4	.06 %	.10 .	.25	.08
Linseed crude c-l bblsgal	.801/4	.773/4	.81%	.84%	1.85	.57
Olive, denatured gal	1.55	1.40	1.38	1.20	4.60	1.05
Peanut refinedlb	.151/2	.141/4	.14%	.15	.30	.08
Soya Bean bblslb.	.12	.12	.12	.13 1/4	191/4	.07
Average,	4.87	4.85	4.85	4.82	5.92	1.50

Current Quotations and Comments on Specific Items, Page 236-238

Further sharp advances in the spot price of Chinawood oil in barrels was again the feature of the oil market this week. Tanks on the Coast are also higher but have not advanced in proportion to the spot market. Buyers here are a little cautious of buying too far ahead at these levels and seem satisfied to fill their needs from barrel oil on spot. The state of chaos in China is primarily responsible for the upward movement, although the demand is also improving.

Contrary to prediction of the past month refined cottonseed oil continues to advance and this week has recovered better than at any time this season. Crude oil is also advancing and has now reached the 8c to level in the Valley and Southeast. Sales on Monday last were 28,800 well above the daily average. This strength in cottonseed oil has brought a better tone to crude corn oil as well as coconut oil here and on the Coast. Manila coconut for futures is again higher this week and the market has lost the listlessness of the Fall months. Denatured olive oil also is very strong and was marked by advances late last week. In some quarters it is stated that spot oil is unobtainable at any price. Much the same is true of Olive oil foots which are higher for shipment and nearby and quoted nominally here, as there are no stocks. Importers of Japanese and English rapeseed oil have been forced to increase the spot price rather sharply on both grades following despatches from the primary market placing the shipment figures above the previously quoted spot market.

Linseed Oil alone seems not to have gained strength this week. The spot price is unchanged from last week, but is subject to shading which was not the case previously. Consuming inquiry is dull and crushers will gladly accept bids a few points under the quoted market. Animal oils and fats are holding steady with a few minor price adjustments but on the whole show no change for the week. The same is true of castor oil which has steadied at present levels following rapid advances in January.

LONDON CHEMICAL

(Special to CHEMICAL MARKETS)

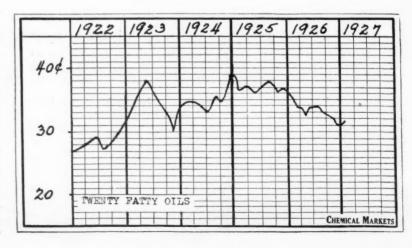
London, Feb. 9-(By Radio)-Industrial chemicals are not very active. Linseed oil is higher. Toluol is firmer, Shellac is easier.

London, Jan. 21 (By Mail)-Chemical market shows signs of improvement-demand is somewhat more active and decidedly more enquiry is in evidence for forward delivery. Prices are firm with a tendency to advance in certain directions. Caustic soda continues to have a steady sale. Bleaching powder is quiet. Alkali is in steady consumption and saltcake is receiving more attention. Chlorides of Magnesium and Calcium are duli at former rates. Sulfide of sodium is still offered at low prices. Soda crystals are without change. Sulfate of copper meets with a more steady sale. Cream of tartar is firmer, oxalic acid is scarce on spot and lead products generally are

Argentina's export duty on linseed has been changed for the month of February from .01 peso to .08 peso per metric ton; on quebracho extract from 1.64 pesos to 1.41 pesos per metric ton, and on quebracho logs from .36 peso to .54 peso per metric ton, according to a cable from Assistant Commercial Attache H. B. MacKenzie, Buenos Aires.

Synthetic resin hearing set for Feb. 8 was postponed by Tariff Commission to Feb. 11.

Krupps of Essen reported loss of 2,100,000 marks for year ended Sept. 30, 1926.





Rubber Workers. nemicals

OR a period exceeding fifty years, KLIPSTEIN CHEMICALS Phave been steadily earning favor in the development of formulae suited to the varied specifications existent in every phase of Rubber Manufacture.

Definite and uniform standards of purity, strength and adaptability commend our products to the purposes of both Laboratory and Compounding departments of this industry. Inquiry is invited on

Carbonate of Magnesia

Oxide of Magnesia (Heavy, Medium, Light and Extra Light)

Zinc Oxide (Red, Green and White Seal)

Lithopone

Talc

Iron Oxide

Waxes

Akcolith (A specialized Lithopone Product)

Carbon Tetrachloride

Colors

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644.52 Greenwich St.

Branches: Boston Philadelphia Chicago Providence, R. I. Charlotte, N. C.



Represented in Canada by A. KLIPSTEIN & CO. Ltd. 12 St. Peter St. Montreal

[Agricultural Chemicals]

BLOOD AND TANKAGE HIGHER ON FEEDING DEMAND

Demand From Middle West Cleans New York Market—Prices on Both Advance—South American Also Higher—Sulfate of Ammonia in Better Position—Nitrate of Soda Quiet But Steady—January Shipment Figures—Insecticides Quiet Following Good Contract Season

Advanced

Ammonium Sulfate, deliv., 5c 100 lbs. Bone Meal, imported, 50c ton.

Blood, dried, New York, 50c unit.
Blood, dried, Chicago, 40c unit.

Tankage, spot N. Y., 25 & 10c unit.

Tankage, So. Amer., 10 & 10c unit.

	Trend	of the Marke	et.			
Acid Sulfurie 66°ton	bToday \$15.00	Two Weeks Ago \$15,00	Last Month \$15.00	Last Year \$14.00	War Peak \$55.00	Pre- War \$20.00
Amm. Sulfate 1001bs	2.55	2.50	2.50	2.95	1.75	2.65
Arsenie	3.50	3,50	3.50	3.00	18.00	4.00
Copper Sulfate c-l100lbs	4.75	4.75	4.75	4.30	20.00	4.60
Paris Green	.19	.19	.19	.19	.50	.11
Potash Muriate 80%ton	36,40	35.40	36.00	34.90		
Potash Sulfate 90%ton	47.30	46.85	45.85	45.85	440.00	48.07
Phosphate Acid 16%ton	10.00	10.00	10.00	10.00	11.00	3.00
Phosphate Rock 68%ton	3.00	3.00	3.00	2.75	2.65	3.00
Sodium Nitrate100lbs	2.64	2.60	2.54	2.67	5.00	190
Average	12.534	12,524	12.433	11.779	103.50	13.84

Current Quotations and Comments on Specific Items, Pages 226-240

A sharp upward movement in the price of dried blood and tankage in all sections of the country late last week was the feature of this group. The demand for both these items from the middle west for feeding purposes has taxed every market and practically cleaned the New York market of stocks. At best, stock's were not large before the demand set in, so that now the shortage is very noticeable and the market considerably higher. This has of course affected the market on South American goods and the only offerings of tankage from there are for April delivery, too late for the current season.

Sulfate of ammonia is in somewhat better position also. Sales have been made this week by first hand sellers at figures well over those prevailing two weeks ago for delivery to Northern points. Resale parcels are not factors in the market for the moment at least. Imported bone meal is better held by factors here and they have advanced their price somewhat, although there has been no change in the demand. The position of cottonseed meal since the recent advance in price at the mills has not changed.

There has been a fair demand for nitrate of soda from Northern points this past week, but Southern buyers of large quantities have been holding off. At present only spot stocks are being sought, with the result that imports are small and stocks low in most ports. According to advices from Chile January shipments were as follows:

Europe, 75,000 tons; U. S. Atlantic ports; 47,500 tons; U. S. Pacific ports, 3,500 tons; Cuba, 700 tons; Peru, 400 tons.

The movement of insecticides at the moment is quiet. Most of the contract business has been booked and makers now await the annual Spring orders which they fill over and above the contracts written. In the meanwhile prices on all poisons are steady.

Potash has been found in twentysix additional wells in eight counties in Texas and three counties in New Mexico. There are now about seventy wells in eighteen counties of Texas and six wells in three counties of New Mexico that have furnished potash-bearing samples.

STIMULATES NITRATE SALES

Baltimore, Feb. 9—According to a dispatch from Washington the guarantee offered by the Nitrate Producers Association, Santiago, Chile, to repurchase from importers unsold stocks of nitrate of soda on hand next July, has greatly stimulated the demand for export tonnage according to cable advices received by the Department of Commerce yesterday.

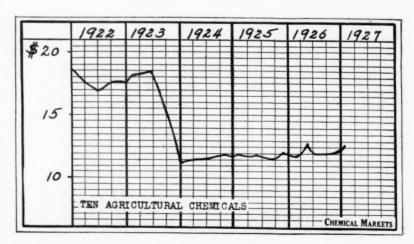
Several weeks ago the association was empowered to sell up to 400,000 tons of nitrate of soda at 19 shillings 9 pence per metric quintal between Jan. 20 and May 31, 1927, guaranteeing buyers repurchase 75 per cent of any portion of the stocks remaining unsold in their possession after June 30 next. Up to Jan. 29, sales on this repurchase plan were 228,-447 metric tons.

At the beginning of 1927 there were only 30 nitrate plants in operation in Chile, the lowest since 1922, but several establishments are planning to reopen.

Production during December, 1926, fell to 86,737 tons, the lowest reached in 1926. The estimated world stocks, Dec. 31, were 1,833,725 metric tons compared with 1,735,-148 at the close of 1925.

Borax has been discovered on the Mojave Desert, thirty-five miles from Barstow, Cal., where Pacific Coast Borax Co., San Francisco, has been drilling. A total of fifty-three test holes have been bored to a depth of 600 feet, where a deposit of pure calcium borate about one hundred feet in thickness, has been found. The proved field is about five miles long and more than three miles wide.

Apex Chemical Co., New York, has practically doubled the plant capacity at the works, Elizabethport, N. J.



We Offer

The Following High Grade Chemicals to the Trade

Ammonia, Anhydrous Ammonia, Aqua Ammonium Chloride Barium Carbonate Barium Chloride Case Hardening Compounds Copper Carbonate Copper Sulphate Cresylic Acid Cyanide, Aero Brand Cyanide, Copper Cyanide, Potassium Cvanide, Silver Cyanide, Sodium Cyanide, Zinc Dicyandiamid

Diortho-Tolylguanidine

Diphenylguanidine

Formic Acid Hydrocyanic Acid, Liquid Lead Acetate Ortho Toluidine . Potassium Carbonate Potassium Prussiate, Red Potassium Prussiate, Yellow Sodium Prussiate, Yellow Sodium Sulphide Sulphocyanides Sulphuric Acid Thiocarbanilide Thiourea Urea Xanthates, Sodium & Potassium Zinc Dust, "Asarco" Brand Zinc Sheets Zinc Sulphate, "Asarco" Brand

American Cyanamid Co.

535 Fifth Avenue NEW YORK



[Industrial Raw Materials]

LOWER GRADES OF ROSIN REACT UPWARD AGAIN

Recover From Decline of Last Week—Statistical Position Firm With Stocks in Small Supply—Turpentine Fractionally Lower—Market Seems Unsettled—Tanning Materials in Demand and Scarce—Carnauba Wax Declining Slowly—Japan Wax Steady—Egg Yolk and Albumen Firm and Higher

Albumen, edible egg, 1c lb.
Chestnut Extract, 25%, ½c lb. Rosin, E, 10c 280 lbs.
Divi Divi, ship., \$1.00 ton.
Egg Yolk, spot, 5c lb.
Rosin, I, 15c 280 lbs.

Declined

Carnauba Wax, No. 1 yellow, 10c lb.

Carnauba Wax, No. 2 regular, 5c lb.

Carnauba Wax, No. 3 No. Country, 1c lb.

Rosin, G, 35c 280 lbs.

Rosin, K, 10c 280 lbs.

Turpentine, spot, 1c gal.

Current Quotations and Comments on Specific Items, Pages 238-240

Common and medium grades of rosin with their fluctuating tactics of the past month continue to be the feature of this market. After a drop last week current quotations represent an advance to levels of the previous week. Statistically the position of the market is firm as stocks in all quarters are not large and the daily receipts at Southern ports are small. Factors have an optimistic outlook as to the future of the market. Turpentine is holding up fairly well on spot with the movement for the week representing about a 1c gal. decline. Factors at the primary markets are not very bullish as to the immediate future prospects of the turpentine market.

Strength, combined with a better demand for tanning materials has brought these items to the fore since the first of the year. Valonia in particular is practically unobtainable at any price, and firm markets prevail on several others including divi divi. wattle and mangrove barks. Producers of chestnut extract have recently advanced their price and with raw materials in small supply look to a maintenance of the market. At a time when Japan wax prices seemed about to recede to levels of last year, the replacement market advancd on political troubles in China and the spot market is now holding firm. Carnauba wax continues to decline slowly on spot and though stocks here are not large, replacements are coming along and the market should approach levels of last Spring shortly.

(Special to CHEMICAL MARKETS)

Savannah, Ga., Feb. 7—Turpentine closed last week at 72%c gal. on limited sales of 50 bbls. to one buyer. There seems a tendency in the market to show a decline this week as most buyers are acting a little indifferent and it seems likely that they are filling orders from old stocks. Sales for the past week

have been small, but about equal to receipts. The disturbance in London over a month ago, continues to make the position here uncertain. Should the market show any signs of advancing it is probable that some of the holdings will be turned loose. The future price looks dubious as regards an advance. Receipts last week were 583 bbls.; sales reported, 442 bbls.; shipments, 1,280 bbls.; Savannah stocks, 9,076 bbls.

Rosins were posted firm on Saturday with only a portion of the offerings of 549 bbls. sold. The market shows a decline of from 10c to 40c on the common grades for the week. At the closing on Saturday there were 419 bbls. carried over refusing lower bids. Rosin is in a firm position as regards the coming month and when the new crop comes to market freely there will be sufficient demand to hold prices up in a satisfactory manner. The worlds stocks are said to be lower now than at any time during the past ten years. Receipts of rosin last week were 3,303 bbls.; sales, 2,-603 bbls.; shipments, 18,494; Savannah stocks, 54,691 bbls. Current quotations: B, D, E, F, \$10.80; G, \$11.00; H, \$11.45; I, \$11.65; K, \$13.05; M, \$13.25; N, \$14.25; WG, \$15.00; WW, \$16.75.

Jacksonville, Fla., Feb. 5—Turpentine closed steady at 72½c gal. with no sales and no bids, 127 bbls. carried over. Rosin closed firm on sales of 531 bbls. There were two buyers and 208 bbls. were carried over refusing bids. Turpentine stocks are 27,697 bbls.; rosin stocks, 76,260 bbls.

S. J. Squire, deputy minister of highways of Ontario, has resigned to become a director of Imperial Varnish and Color Co., Ltd., Toronto, which operates the largest dry color plant in Canada.

TURPENTINE IN FRANCE

Spirits of turpentine in Paris, Feb. 1, was quoted at 555 francs per 100 kilos, and 330 francs per 100 kilos for rosin (WW) with market quiet. The above prices are equivalent to \$.69 per gallon for turpentine and \$13.70 per 280 pounds for rosin. Exports of French turpentine and rosin totaled 1,926 and 9,367 metric tons respectively during December. (Metric ton equals 2204.6 pounds).

William G. Sutphen, assistant treasurer New Jersey Zinc Co., and a former Mayor of Bloomfield, N. J., died at his home at Verona, N. J., fcrowing an 'llness of several weeks Mr. Sutphen was born at New Utrecht, L. I., fifty-five years ago. He was a member of Glen Ridge Country Club, a Mason and a director in Bloomfield Trust Co. and Sussex County Trust Co., Franklin.

"Trade Waste and Sewage Disposal" will be discussed by Edward Barton, D. D. Jackson, E. B. Besselievre and Wm. R. Copeland at joint meeting of American Sections of Society of Chemical Industry, Societe de Chimie Industrielle and New York Sections of American Chemical Society and American Electrochemical Society, at Chemists' Club, Feb. 11.

Rates on sulfate of alumina, in carloads, from Kokomo, Ind., to destinations in Wisconsin have been found unreasonable and unduly prejudicial by Interstate Commerce Commission in a decision in the case of Como Chemical Co. against Atchison, Topeka & Santa Fe Railway Co. Reasonable and non-prejudicial rates have been prescribed.

Metal and Ore Corp. has been chartered in New York State by Joseph J. Haesler, for twelve years with Charles Hardy, and Carl Eisen, formerly of Eisen Trading Corp. Mr. Eisen is president and Mr. Haesler vice president and treasurer. The corporation will engage in international business in non-ferrous metals and ores.

Philadelphia Quartz Co. officials and staff celebrated the 59th anniversary of the firm's establishment. Prizes were awarded for a trademark for the company. William T. Elkinton, president, spoke.

Naval Stores Trade Get-Together Meetings is set for Feb. 21-23, at Jacksonville, Fla., Holtel Cerling being headquarters.

Potassium nitrite tariff increase of 50 per cent is asked of Tariff Commission. Present rate is onehalf cent per pound on the refined.

A 'SATISFACTORY SERVICE' IN Alcohol

AMER SOL has proceeded on the theory that a satisfactory service in Alcohol must represent quality of product, dependability of supply, and quick, economical deliveries, and of course a price which is right. Each of these vital advantages is secured in Amersol Alcohol.

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Acid Metanilic

Alcohol Ethyl Denatured

Prices Current

Heavy Chemicals, Coal-tar Products, Dyeand-tanstuffs, Colors and Pigments, Fillers and Sizes, Fertilizer and Insecticide Materials, Naval Stores, Fatty Oils, etc.

Chemical prices quoted herein are those of American manufacturers for goods, spot New York, f. o. b., or exstore, for immediate shipment, unless otherwise specified. Industrial chemical products sold principally on a basis of f. o. b. works are specified as such. Quotations on imported chemicals are so designated. Resale stocks sufficient to be a factor in the market, are quoted in addition to makers' prices and are indicated as "second hands."

Oils and fats are quoted spot New York, or ex-dock.

Quotations on products sold f. o. b. mills, or spot Pacific Coast are so designated.

Industrial raw materials are quoted spot New York, f. o. b., or ex-dock. Materials sold f. o. b. works or delivered at various sections of the country are so designated.

The range of prices given is not "bid and asked," but indicates quotations from different sellers, based on varying grades or quantities or both. Containers named are the original packages most commonly used in the New York market.

Acetaldehyde				
Acid Laurent's				
Acetaldehyde drs, or cyl. e-l wis D		:	.22	
le-I wis		:	.26	
ACETANILID, tech 150 m bbls m	.20	:	.21	
100 m kegs	.22		.40	
85% 100 D chys	.27	:	.30	
92-95% 100 m ebys m	.29	:	.85	
Acetic Ether, see Ethyl Acetate Acetic Ether, see Ethyl Acetate			40	
MOELLINE, DOKAL GIGHLE	4.60	:	.12	
Acetone, CP, 700 fb drs c-1 wks fb.			.12	
Acetone, CP, 700 lb dru c-l wks D. Tank carr, wks	.13	:	.131/2	
350 lb drs le-l was lb		:	.14	
Acetone Oil light drs N. Ygal	1.65	:	1.75	
Heavy, drs N. Ygal	1.65	:	45	
Acetyl Chloride, 100 ib cbys ib	.44		1.50	
ACID Acetic 28% 400 b bbls c-1			2.00	
wics		:	2.25	
70% bbls e-1 wks100 b		:	7.82	
80% com'l bbls c-1 was 100 lb			8.77	
Gladal bhis cal wire . 100 h			11.92	
56% c-1 wks100 lb 70% bbls c-1 wks100 lb 80% com'1 bbls c-1 wks 100 lb 80% pure bbls c-1 wks 100 lb Glacial bbls c-1 wks100 lb Glacial, USP, cby wks .100 lb		:	12.65	
Lc-1 25c 100 lbs differential				
Anthranilic, tech., drs Ib		:	.80	
Paragia tech 100 Th bhis Th	.98		60	
diacial, USF, coy was 100 in Le-1 25c 100 lbs differential Anthranille, tech., drs in 99-100% 100 in drs in Berzolc, tech., 100 in bbls in Boric crys., powd., 250 in bbls in Kegs 100 in in Carbolic, crys., see Phenol Cryst., 250 in bbls crist.	.085	4:	.11	
Kegs 100 lb	.093	6:	.12	
Carbolic, crys., see Phenol				
Clude 30 70 Sogat Outs Bas	.31			
10% 50gal bbls gal Carbonic, see Carbon Diexide	.23		.28	
PR 1				
Chloracette Mono 100 % bbls wks 15 Dl, 150 lb cbys wks 15 Chlorosulfonic 1500 lb drs wks lb Chromle 98% 400 lb drs ms lb Chromotrople, 300 lb bbls 15 Citric, USP, cryst 230 lb bbls 15 Powd, USP, 200 lb bbls 15 Imported, crys, 112 lb kegs lb Cleve's 250 lb bbls 16		:	.25	
Chlorosulfonie 1500 lb dra who lb	15	:	1.00	
Chromie 98% 400 lb drums . lb	.37		.40	
Chromotrople, 300 lb bbls lb	1.00		1.06	
Citrie, USP, cryst 230 lb bbls lb	.43	0	.431/2	
Powd, USP, 200 lb bblslb	.44	:	.44 1/4	
Cleve's 250 h hhls h	. 23	•	.43 1/2	
Cleve's 250 fb bblsfb Cresylle, 95% dark drs NY gal	.57	:	.60	
97-39% pale NYgal	.60		.65	
Formic, 85% tech., 140 ebys ID	.10	:	.101/	
German 225 B bble wire	.10	·	.11	
H 225 To bbls wks	.57		.43 % .97 .60 .65 .10 % .11 1.06 .63	
Hydrobromie, 48% com'l 155 b				
cbys wks	.45	:	.48	
Hydrochloric, see Acid Muriatic	.80		0.0	
HYDROFLUORIC. 30% 400 Th	.80			
bbls 🖦 ID	•••	:	.08	
30% 100 lb cbys wks lb		:	.08	
48% single 100 lb cbys wks lb		:	.10	
52% 100 to chy, was ID		:	.12	
60% 100 m eby wks m	***	*	.11	
60% 300 m dr wks m			.13	
Cresvie, 95% dark dra NY gal 97-39% pale NY gal 97-39% pale NY gal Formic, 85% tech., 140 ebys In 90% 96 fb ebys Incl Ib Gamma, 225 fb bbls wks Ib Hydrochoric, see Acid Muriatle Hydrocyanic, wks cyl Ib NORFLUORIC, 30% 400 lb bbls włws Ib 30% 100 lb ebys wks Ib 52% 100 fb ebys wks Ib 52% 100 fb ebys wks Ib 52% 100 fb ebys wks Ib 60% 300 fb ebys wks Ib	.25	:	.26	
ENTEROLIUMILLEE, NO. 450 Ib bhis				
wks	***		.11 3.00 .06 .07	
LACTIC, 22% dark 500 m bbls m	.05	14:	.06	
22% light bhla D	.06	14:	.07	
44% dark bbls Ib 44% light bbls Ib	.11	:	.12	
Laurent's 250 lb bbls	.13		.1314	į
Tank Carsgal	.02		.07 .12 .131/4 .54	ė

Chemicals

Acetone—In steady demand for domestic consumption and export. Prices are firm and unchanged.

Acid Acetic—Schedule is firm in practically all directions. Some price cutting exists in prices to dealers.

Acid Formic—Demand for this item is reported at a standstill by leading importers. Whether consumers are too heavily stocked or some one is supplying low priced material is not known.

Acid Nitric—Schedule is firm and unchanged in all directions and movement is good.

Acid Oxalic—Scarcity persists and premium prices are being obtained in many transactions.

Acid Sulfuric—Makers report normal withdrawals on resting contracts. Supplies are well in accordance with the demand and prices are firm at the schedule.

Alcohol Denatured—Position is weak. The warm weather has greatly slowed the consumption of antifreeze and has resulted in jobbers not taking their requirements. Molasses is firm in price although supplies are in excess of the demand. If the molasses can be held at firm prices, alcohol cannot go very low. Supplies of alcohol are large and plant capacity is greatly in excess of the demand. At the moment shading by 2c gal. is quite general although makers have not openly reduced their schedules.

Alcohol Butyl—Manufacturer has reduced quotations ¼c tb for February deliveries. Contract prices are: Tanks 18½c tb; Drug Carlots 19c tb; Less Carlots 19½c tb. Spot prices remain at 1c tb premium.

Ammonia—Market for both anhydrous and aqua remains in a weak
over produced state with makers attempting to obtain business but apparently unwilling to lose any more

_	Alcohol Ethyl De	matu		
1	ACID, HYDROFLUORIC (Cent'd) ACID, Metanilie, 250 lb bbls . lb	.60	:	.65
1	Mixed, Sulfuric-nitrie	0734		.08
1	Drums, wks N Unit Drums, wks S Unit Tank cars, wks N Unit Tank cars wks S Unit	01		.011/
1	Tank care why N linit	06		.061/2
ı	Tank cars was S Unit	.008	:	.01
١	Monosulfonic F Delta 50 lb tins lb		:	1.65
	MURIATIC 200 chose was 100 h	1.79		1.80
ı	chys c-l wks 100 m			1.45
ı	Tank cars wks 100 fb		:	1.05
ı	18° 120 h chya e-1 wks100 h			1.35
l	Tank cars, wks net ton			.95
l	Nanhthienie tech 250 m bhis m	55	0	.59
	MURIATIC, 20° cbys wks 100 fb cbys e-l wks100 fb Tank cars wks100 fb 18° 120 fb cbys e-l wks100 fb Tank cars, wksnet ton Naphthionic tech, 250 fb bbls fb N. & W. 250 fb bblsfb	.95		.99
l				
l	Cbys e-1 wks100 D		0	5.00
Ī	40° cbys c-1 wks100 lb		:	6.00
1	42° cbys e-1 wks100 lb			6.50
1	Lc-l 25c 100 lbs, differential			
1	CP, chys single wks100 m	.12		.13
1	## ITRIC 360 135 fb Cbys c-1 wks100 fb 400 cbys c-1 wks100 fb 420 cbys c-1 wks100 fb Lc-1 25c 100 lbs, differential CP, cbys single wks100 fb Oxalic, 300 fb bbls wks N. Y. fb Imp., 560 fb casks fb. Phosphoric, 50% 150 fb cbys fb Serney USP, 70fb drums. fb	.11	*	.111/4
ì	Imp., 560 h casks h.	.114		.12
l	Phosphoric, 50% 150 lb cbys lb Syrupy USP, 70 lb drums. lb Demis lb Imported lb	.07	:	.071/2
ı	Syrupy USP, 70 lb drums lb		**	.17
i	Demis		*	.18
I	Imported	.16	:	.161/2
ł	District Co. District Association			
l	Picramic, 300 h bbls h			.50
1	Pierie, 450 m bbls e-l m	.30		.33
l	Pyrogallic tech 200 h bbls h		:	.86
Į	S kegs			2.50
١	Salicylic tech., 125 m bbls m	.27		.32
1	Primaric, 300 Tb bbls Tb Picric, 450 Tb bbls e-1 Tb Pyrogallic tech 200 Tb bbls Tb S kegs Tb Salleylic tech., 125 Tb bbls Tb Sulfanilic, 250 Tb bbls Tb SULFURIC, 660 180 Tb cbys	.15		.16
1				
1	SULFURIC, 660 180 m ebys			
1	Ic-I wks100 lb	1.60	:	1.95
- 1	1 500 Pb drawns who 100 Pb		:	1.30
1	Drume al was 100 m			1.20
	Tank com who not ton			15.00
1	600 1 500 th drume who 100 th			1 10
-	Drume c-1 wky 100 m			871/
- 1	Tank care wks not ton			10 50
1	CP 175 D chws 100 D	0.7		0.00
ı	SULFURIC, 66° 180 m ebys 1e-1 wks	.01	•	.00
	Oleum 20 pc 1500 lb drums lc-1 wks		:	1.50
1	Tank care who not ton	10.00		10.00
	Oleum 40% des le-l whe not ton	10.00		49.00
1	Oleum 60% dre was net ten	62 00		12.00
1	Tannic, tech. 300 m bble m	20		40
	Tartaric, USP, cryst powd 300 m	.00	•	.40
	bbls			9914
1	Imp., USP., 240 m bblsm	. 271	1.	28
	Tobias. 250 m bbls		*	.85
	Tungstic, 100 lb kegs lb		:	1.00
	ALCOHOL. Amvi See Fixel Off			
	ALCOHOL. amvl See Fusel Off Buts! Normal 50gal drs wis e-1 Ib Drums le-1 wks	10		20
	Drums le-1 wks	10	1.	201
	Tanks cars wks	19	12.	101/
1	Butyl Tertiary 50gal drums gal	.50	2.	. E. 4
	Diacetone, 50gal drs del gal	1.70		1 90
	Ethyl, USP 190pf 50gal bhls gal	2.10		3.70
	Anhydrous, drumsgal	.50		.55
	Denatured			.03
	50gal bbl inclgal Carlotsgal 50gal drums extragal Tank Carsgal		0	.463
•	Carlotsgal		0	.441
	50gal drums extragal	***	:	.374
-	Tank Carsgal			.351

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Alcohol, Ethyl, Denatured

Chemicals

Antimony, Needle			
ALCOHOL, Ethyl, Denatured			
No. 1 Special denat. 190pf 50gal bbl inclgal		:	.461/2
Carlotsgal	• • •	:	.441/2
50gal drums extragal			.351/2
No. 5 Complete denat. 188pf			
50gal bbl inclgal	•••	•	.44
50 gal drums extragal			.30
Tank carsgal			.33
Isopropyl, refined, 90-91% 50	1.00	:	1.25
Propyl ami., 50gal drs B	1.25	:	1.00
Ref'd. 98-99% drsgal	.80	:	.82
Aldehyde Ammonia, 100gal drums Ib Alpha-Naphthol crude 300 Ib bbis Ib		:	.65
Befined	.85		.90
Alpha-Naphthylamine, 350 h bbls b	.35	:	.37
ALUM, Ammonda, lump 400 h bbls	0.15		3.50
Oround 400 lb bbls wks 100 lb	3.15 3.25 3.65	:	3.65
Powd. 380 lb bbls wks 100 lb	3.65	:	3.90
Chrome, 500 lb eks., who lb Potash, lump, 400 lb wks. 100 lb	5.25 3.50	:	5.50 3.75
Bbls e-l wks100 ib	3.35		3.40
Imported lump100 lb Ground 400 lb bbls wks 100 lb ·	2 50	:	3.25 3.85
Imp., 350 casks100 lb	2.65	:	3.00
Powd. 380lbs bbls was 100 m	2.65 3.50 5.25	:	4.00
Chrome, 500 lb casks wks 100 lb Soda Grd., 400 lb bbls wks 100 lb			
Bbis., e-1 wks 100 m	.35		3.50
Aluminum metal, c-l NY100 lb Chloride, anhyd 275 b drs b		: :	26.00
Crystals, 375 b bbls b	.00		.061/2
30% sol., 120 D chrs D		:	.08
Hydrate 96% light 90 b bbls b			
Hvy., 62-64% 220 bgs lb 400 lb bbls wks lb	.06	4:	.06 1/2
Stearate, 100 B bbls B	.23		.24
SULFATE, Iron-free bags e-1			1.75
wis		0	1.90
Imported, spot100 B	1.60	:	1.65
Bbls e-l wks100 fb	1.35		1.40
Amidol (See Diaminophenel)			
Aminoanobensene, 110 h keps h			1.15
AMMONIA, anhyd. 100 B cyl . B.	.11	:	.121/2
Water, 26° 800 D drs del D Drs., e-1 delivered D.			4100 8/
Acetate, 100 lb kem		:	.34
Biffueride, 800 m bbls m	.21	:	.22
Bromide, 450 lb bble 50 lb bas lb	,23		.23
Imported, 112 h boxes h	.50	:	.52
Carb. tech., 500 lb cases lb	.08	% :	.09
USP, lump 100 h kepsh	.11	7:	.111/2
Tanks B GF cbys B Acetate, 100 lb kegs B. Biffuoride, 800 lb bbls lb 100 lb kegs lb Brounide, 450 lb bbls 50 lb has lb Imported, 112 lb boxes lb Carb. tech., 500 lb cases lb Powd., tech., 550 lb cks lb USP, lump 100 lb kegs lb Chloride White 250 lb bbls wire lb	.13	:	.131/2
Chloride White 250 lb bbls wks lb 250 lb bbls e-1 wks lb	.06	72 .	.0094
Imp. white 600 lb cks lb		:	.051/2
C.P. USP, gran bbls Ib Gray, 250 lb bbls wks Ib	.13	:	.131/2
Bbls., c-l wks B	.07		0.77
Bbls., e-1 wks B Imp. gray 550 lb csks . B	.06	:	.06%
Lump, 500 lb casks spot . lb Lactate, 500 lb bbls lb	.11	:	.11%
merined Crystals bols ID		:	.20
Oxalate, pure 100 h kegsh	.35		.37
Persulfate, 112 keps D Phosphate, dibasic 200 D bbls D			.38
Tech., powdered 325 lb bble lb	.12	:	
Meno, 325 lb bbls lb Sulfate bulk c-l100 lb Southern points100 lb.			2.55
Southern points100 lb. Imp., 200 dbl by far 100 lb			2.55
Sulfocyanide tech., 100 h km h	.40	:	.45
Amyl-Acetate, tech., 50gal drs gal Refined 50gal drumsgal		:	2.25
Refined 50gal drumsgal Alcohol, see Fusel Oil	2.40	:	2.50
Salt 200 m bbls m	.15	:	
Anthracene, 80-85% 600 lb casks			
Anthraquinone, sub 125 lb bbls lb			1.00
Antimony metal slabs tons lots Th	.13	0 0	.131/4
Needle powd 100 lb cs lb	.15	14:	.16

money in the attempt. At present prices producers are losing on every sale. A new plant is coming into production on March 15, and one discontinues operations on March 1.

Ammonium Chloride-Although the movement is very heavy, supplies are plentiful and prices are unchanged in all directions. Domestic material is finding a steady outlet at unchanged prices which remain %c to above imported prices. Imports of 2,521,271 lbs. during December; brought the total for 1926 up to 15,811,876 lbs.

Aniline Oil-All makers are adhering to schedule prices of 14% c tb in tanks, and 15c@16c fb in drums. Contract withdrawals are well up to normal.

Antimony-Metal is firm on spot and in more demand at 13c@131/4c th for carlots. The situation in the far East has served to strengthen that market.

Arsenic-This market reached the turning point last month and domestic refiners are firm at 3% c fb. Consumption exceeded production last year, and imported supplies on spot are exhausted. Import prices are above domestic prices.

Barium Chloride-Makers are following imported prices rather closely. At the moment prices are firm, but weakness develops occasionally when two or more importers have lots on the dock at the same time.

Benzene-Tone of the market remains weak. Supplies are free but general quotations remain at 23c gal. Some shading of this schedule is reported, particularly by second hands who had contracted for large supplies of motor benzene. Production is large and this has more than overcome any strength given to the market by the recent rise in gasoline prices.

Beta-Naphthol-All makers report a steady demand at firm unchanged prices.

Bleach-Consumption and production are well balanced and prices are firm.

Blues-Rather quiet at this time with routine business being booked at 30c@33c tb as to grade and seller.

Bordeaux Mixture-With the contract business booked the marke is quiet now until the Spring demand for immediate shipment lots sets in.

Calcium Acetate-Market remain

Antimony C	hloride
Calcium	Nitrate

1	ANTIMONY CHLORIDE, anhyd 1000 D	
	ANTIMONY CHLORIDE, anhyd 1000 lb drs	.17
	Sol'n 130 lb carboys 48° lb	.17
	Oxide, 500 lb bbls lb .16 1/4:	.17
ı	Sulfuric golden, 250 m bbls m .15	.16
	Vermilion, 250 lb bbis lb	.371/4
١	Tartrolactate, 500 lb bbls lb	.45
1	Arsenic metal 220 lb kegs lb .45	.50
ı	White 112 h cases NV h 0314	.0344
١.	DARLIN BINOVIDE and Destroy Hards	
ľ	Carbonate 300 lb bbls wkston 50.00	52.00
1	200 lb bgs wkston 47.50	50.00
ı	Imports, casks NYton 47.00	48.00
l	Chloride, 800 lb bbls wkston 65.00	67.00
ı	200 lb bags wkston 61.00	: 63.00
I	Imports spot	64.00
ı	Import, 86-88% 400 m drs D .13	.1314
١	BARIUM BINOXIDE, see Barium dioxide Carbonate 300 lb bbls wks ton 50.00 200 lb bgs wks ton 47.50 Imports, casks NY ton 47.00 Chlorate, 112 lb kegs NY lb .12 Chloride, 800 lb bbls wks ton 65.00 200 lb bsgs wks ton 65.00 Imports spot ton 63.00 Dioxide, 88% 690 lb drs lb .13 Import, 86-88% 400 lb drs lb .13 Hydrate, 500 lb bbls lb .04%	.04%
ı	Nitrate 700 h csks h 0714	. 09
ı	Sulfocyanide 600 lb bbls lb .27	28
1	Nitrate, 700 lb csks lb .07 1/2 Sulfocyanide 600 lb bbls lb .27 Barytes, floated 350 lb bbls wks ton 23.00	24.00
1	Imported	33.00
1		
1	BENZENE	. 04
1	Commercially pure the was gal .23	.24
1	Comm. 90% 8,000gal tks wks gal .23 Commercially pure tks wks .gal .23 Drum lots 5c gal higher Bensidine Base, dry 250 h bbls h .70	
	Benzol, see Benzene Benzoyl Chloride 500 lb dra lb	: 1.00
١	Benzoyl Chloride 500 lb drs lb Benzoyl Acetate 100 lb cbys lb 1.30 Benzoyl Acetate 100 lb cbys lb 1.15 Chloride 95% tech 925 lb drs lb	1.40
ı	Benzoate, bulk	: 1.35
	100 To com	25
1		50
1	BETA-NAPHTHOL 250 lb bis wks lb c-l lb Sublimed lb .55 Beta-Naphthylamine tech 200 lb .63	: .24
	Sublimed	: .60
1	Beta-Naphthylamine tech 200 h	
ı	Sublimed 200 P. hale.	: .67
	Blanc Fixe, dry 400 lb bble was ten 80.00	: 1.38
		: 90.00
1	Imported, bblston 70.00	: 90.00 : 72.00
	bbls	: 90.00 : 72.00 : 55.00
	BLEACHING BAWARR TOOM 4-	
	BLEACHING BAWARR TOOM 4-	
	BLEACHING BAWARR TOOM 4-	
	### BLEACHING POWDER, 700 m drs e-1 whs contract 100 m e-1 spot whs 100 m 300 m drs e-1 whs contract 100 m e-1 spot whs	
	el whe contract100 h el spot wha100 h el spot wha100 h 300 h dra el wha centract 100 h el spot wha100 h el spot wha100 h	
	### BLEACHING POWDER, 700 m drs e-l wise contract 100 m e-l spot wise 100 m e-l spot wise contract 100 m e-l spot wise contract 100 m e-l spot wise 100 m e-l spot wise	: 2.00 : 2.10 : 2.25 : 2.35
	### BLEACHING POWDER, 700 m drs e-1 whs contract100 m e-1 spot whs100 m s-1 spot whs100 m e-1 spot whs100 m e-1 spot whs100 m 100 m e-1 spot whs100 m 100 m 101 15c 100lbs differential 100 m Prussian Soluble	: 2.00 : 2.10 : 3.25 : 2.35
	### BLEACHING POWDER, 700 m drs e-1 whs contract100 m e-1 spot whs100 m s-1 spot whs100 m e-1 spot whs100 m e-1 spot whs100 m 100 m e-1 spot whs100 m 100 m 101 15c 100lbs differential 100 m Prussian Soluble	: 2.00 : 2.10 : 3.25 : 2.35
	### BLEACHING POWDER, 700 m drs e-1 whs contract100 m e-1 spot whs100 m s-1 spot whs100 m e-1 spot whs100 m e-1 spot whs100 m 100 m e-1 spot whs100 m 100 m 101 15c 100lbs differential 100 m Prussian Soluble	: 2.00 : 2.10 : 3.25 : 2.35
	### BLEACHING POWDER, 700 m drs e-1 whs contract100 m e-1 spot whs100 m s-1 spot whs100 m e-1 spot whs100 m e-1 spot whs100 m 100 m e-1 spot whs100 m 100 m 101 15c 100lbs differential 100 m Prussian Soluble	: 2.00 : 2.10 : 3.25 : 2.35
	### BLEACHING POWDER, 700 m drs e-1 whs contract100 m e-1 spot whs100 m s-1 spot whs100 m e-1 spot whs100 m e-1 spot whs100 m 100 m e-1 spot whs100 m 100 m 101 15c 100lbs differential 100 m Prussian Soluble	: 2.00 : 2.10 : 3.25 : 2.35
	BLEACHING POWDER, 700 B drs e-1 was contract . 100 B	: 2.00 : 2.10 : 3.25 : 2.35
	BLEACHING POWDER, 700 B drs e-1 was contract . 100 B	: 2.00 : 2.10 : 3.25 : 2.35
	### BLEACHING POWDER, 700 B drs	: 2.00 : 2.10 : 3.25 : 3.25 : 3.35 : .07 : .08½ : .05½ : .05½ : .05½ : .10
	BLEACHING POWDER, 700 B drs e-I whs contract100 B e-I spot whs100 B 300 B drs e-I whs centract 100 B155 100 bs differential Blues, bronne Chinese, Milori Prussian Soluble B 30 Blue Vitriol, see Copper Bulfate Bone Ash, 100 B keps B 68 Black, 200 B bbls B Dorax, crys., 500 B bbls B Powdered, 300 B bbls B 04 % Exp 100-150 B B 04 % Bordeaux Mixture, 18% pd B 11 Parte, bbls B 0.8 Bromide, see potass. bromide etc Butter of Antimony, see Antimony Chlorids Butyl Acetate normal tk drs wks gal 1.42 Drums e-I wks sal 1.442 Drums e-I wks sal 1.442	: 2.00 : 2.10 : 3.25 : 2.35
	BLEACHING POWDER, 700 B drs e-I wise contract 100 B e-I spot wis 100 B 300 B drs e-I wise centract 100 B e-I spot wis 100 B II-1 15c 100 in differential Blues, bronne Chinese, Milori Prussian Soluble Busses, Milori Prussian Soluble Bose Bose Blue Vitriel, see Copper Bulfate Bone Asb, 100 B kegs Bose Black, 200 B bbls Bosrax, crys., 500 B bb	: 2.00 : 2.10 : 2.25 : 2.25 : 2.35 : .03 : .07 : .08 \(\) .05 \(\) .05 \(\) .05 \(\) .10 : .10 : .10
	BLEACHING POWDER, 700 B drs e-I was contract . 100 B e-I spot whs . 100 B 300 B drs e-I was centract 100 B e-I spot whs . 100 B Ic-I 15c 100lbs differential Blues, bronne Chinese, Milori Prussian Soluble . B 30 Blue Vitriel, see Copper Bulfate Bone Ash, 100 B kegs . B 68 Black, 200 B bbls . B 68 Black, 200 B bbls . B 043 Fowdered, 300 B bbls . B 043 Kgs 100-150 B B 0 043 Kgs 100-150 B B 11 Paste, bbls . B 08 Bromide, see potass. bromide etc Butter of Antimony, see Antimony Chicrids Butyl Acetate normal tk drs wks gal 1.44 Drums, Ic-I wks . gal 1.44 Secondary 50gal drums . 21 1.00 Secondary 50gal drums . 21 1.00	: 2.00 : 2.10 : 2.25 : 2.35 : .33 : .07 : .0834 : .05 4: .0434 : .0534 : .12 : .10 : .1.45 : .1.45 : .1.45 : .1.50 : .1.05
t	BLEACHING POWDER, 700 B dra e-l whs contract . 100 Bl spot whs . 100 B .00 D dra e-l whs centract 100 Bl spot whs . 100 Bl spot spot Bulratel spot spot spot Bulratel spot spot spot spot spot spot spot spot	: 2.00 : 2.10 : 2.25 : 2.25 : 2.35 : .03 : .07 : .08 \(\) .05 \(\) .05 \(\) .05 \(\) .10 : .10 : .10
t	BLEACHING POWDER, 700 B drs e-l was contract . 100 B e-l spot whs . 100 B 300 B drs e-l was centract 100 B e-l spot whs . 100 B lc-l 15c 100lbs differential Blues, bronne Chinese, Millori Prussian Soluble B B 68 Black, 200 B bbls B 68 Black, 200 B bbls B 68 Black, 200 B bbls B 69 Bray, 500 B 69 Bray, 500 B 69 Brondide, see potass. bromdée etc Butter of Antimony, see Antimony Chieride Butter of Antimony, see Antimony Chieride Butyl Acetate normal the drs wks gal 1.42 Drums, 1c-l wks gal 1.44 Secondary 50gal drums gal 1.00 Aldehyde 50gal drums gal 1.00 Propionate, drs B 34 Stearate 50gal drs 88	: 2.00 : 2.10 : 2.25 : 2.35 : .33 : .07 : .08% : .05% : .04% : .05% : .12 : .10 : .145 : .147 : .150 : .150 : .36 : .36
talenti	BLEACHING POWDER, 700 B drs el was contract .100 B el spot was .100 B 300 B drs el was centract 100 B el spot was .100 B lc-1 15c 100 lbs differential Blues, bronne Chinese, Millori Prussian Soluble B B 68 Black, 200 B bbls B 68 Black, 200 B bbls B B 68 Black, 200 B bbls B B 68 Black, 200 B bbls B B 68 Brand, 200 B bbls B B 68 Brandered, 300 B bbls B B 68 Bromide, see potass. bromide etc Butter of Antimony, see Antimony Chloride Butyl Acetate normal tik drs wis gal 1.42 Drums el wis gal 1.44 Brandered, 200 B B B 11 Secondary Sogal drums gal 1.47 Secondary Sogal drums gal 1.47 Secondary Sogal drums gal 1.00 Aldehyde 50gal drs wis B 70 Propionate, drs B 34 Stearate drs B 57	: 2.00 : 2.10 : 2.15 : 2.35 : .33 : .07 : .08% : .05% : .05% : .12 : .10 : .145 : .147 : .1.50 : .155 : .36 : .60 : .60
ti	BLEACHING POWDER, 700 B drs el was contract .100 B el spot whs .100 B 300 B drs el was centract 100 B el spot whs .100 B lc-1 15c 100 lbs differential Blues, bronne Chinese, Milori Prussian Soluble B B 68 Black, 200 B bbls B 68 Black, 200 B bbls B B 68 Black, 200 B bbls B B 68 Black, 200 B bbls B B 68 Brack, 200 B bbls B 68 Brack, 200 B bbls B 68 Bromide, see potass. bromide etc Butter of Antimony, see Antimony Chloride Butyl Acetate normal tk drs wks gal 1.42 Drums el wks gal 1.42 Drums, le-l wks gal 1.44 Secondary 80gal drums gal 1.00 Aldehyde 50gal drs wks B 76 CADMIUM, metal 100 B bx B 70 CADMIUM, metal 100 B bx B 70	: 2.00 : 2.10 : 2.25 : 2.35 : .33 : .07 : .08% : .05% : .04% : .05% : .12 : .10 : .145 : .147 : .150 : .150 : .36 : .36
ti	BLEACHING POWDER, 700 B drs el whs contract .100 B el spot whs .100 B 300 B drs el whs centract 100 B el spot whs .100 B 1c-1 15c 100 lbs differential Blues, bronne Chinese, Millori Prussian Soluble . B .06 Black, 200 B bbls . B .06 Black, 200 B bbls . B .04 Browdered, 300 B bbls . B .04 Powdered, 300 B bbls . B .04 Fowdered, 300 B bbls . B .04 Bordeaux Mixture, 18% pd . B .11 Paste, bbls . B .08 Bromide, see potass. bromide etc Butter of Antimony, see Antimony Chlorids Butyl Acetate normal tk drs wks gal 1.42 Drums el-1 wks . gal 1.42 Drums el-1 wks . gal 1.47 Secondary 50 gal drums . gal 1.00 Aldehyde 50 gal drs wks . B .70 Propionate, drs . B .34 Stearate 50 gal drs . B .34 Stearate 50 gal drs . B .34 Stearate 50 gal drs . B .35 CADMIUM, metal 100 B bys . B .70 CALCIUM Acetate 150 B bys e-1	: 2.00 : 2.10 : 2.25 : 2.35 : .33 : .07 : .08% : .04% : .05% : .12 : .147 : 1.40 : 1.45 : .1.47 : 1.50 : .1.05 : .75 : .60 : .60 : .60
tallers	BLEACHING POWDER, 700 B drs el was contract .100 B el spot was .100 B 300 B drs el was centract 100 B el spot was .100 B local 15c 100 bs differential Blues, bronne Chinese, Millori Prussian Soluble B B 68 Black, 200 B bbls B 68 Brand, 200 B bbls B 68 Brandle, 200 B bbls B 68 Brandle, 200 B bbls B 68 Bromide, 200 B bbls B 68 Butyl Acetate normal tk drs wks gal 1.42 Drums el wks gal 1.44 Drums, lel wks gal 1.44 Secondary Sogal drums gal 1.00 Aldehyde 50gal drs wks B 70 Propionate, drs B 34 Stearate 50gal drs B B Tartrate drs B 57 CADMIUM, metal 100 B bm B 70 CALCIUM Acetate 150 B bg el	: 2.00 : 2.10 : 2.25 : 2.35 : .33 : .07 : .08½ : .04½ : .04½ : .05½ : .12 : .10 : .145 : .145 : .145 : .150 : .105 : .75 : .36 : .60 : .60
tt	BLEACHING POWDER, 700 B drs el was contract .100 B el spot was .100 B 300 B drs el was centract 100 B el spot was .100 B local 15c 100 bs differential Blues, bronne Chinese, Millori Prussian Soluble B B 68 Black, 200 B bbls B 68 Brand, 200 B bbls B 68 Brandle, 200 B bbls B 68 Brandle, 200 B bbls B 68 Bromide, 200 B bbls B 68 Butyl Acetate normal tk drs wks gal 1.42 Drums el wks gal 1.44 Drums, lel wks gal 1.44 Secondary Sogal drums gal 1.00 Aldehyde 50gal drs wks B 70 Propionate, drs B 34 Stearate 50gal drs B B Tartrate drs B 57 CADMIUM, metal 100 B bm B 70 CALCIUM Acetate 150 B bg el	: 2.00 : 2.10 : 2.15 : 2.35 : .33 : .07 : .08% : .05% : .05% : .12 : .145 : .147 : .1.50 : .1.45 : .1.47 : .1.50 : .36 : .60 : .60
ttil	BLEACHING POWDER, 700 B drs el wis contract .100 B el spot wis .100 B 300 B drs el wis centract 100 B el spot wis .100 B lel 15c 100 bs differential Blues, bronne Chinese, Milori Frussia Soluble B B 68 Black, 200 B bbls B 69 Brax, crys. 500 B bbls B 70 Argunia Bronne	: 2.00 : 2.10 : 2.25 : 2.35 : .33 : .07 : .08 % : .05 % : .05 % : .05 % : .12 : .16 : .1.45 : .1.47 : .1.50 : .1.45 : .1.47 : .1.50 : .3.60 : .60 : .75 : .3.60 : .60 : .75
ttil	BLEACHING POWDER, 700 B drs e-I whs contract .100 B e-I spot whs .100 B 300 B drs e-I whs centract 100 B e-I spot whs .100 B It-I 15c 100 bs differential Blues, bronne Chinese, Milori Prussian Soluble . B 30 Blue Vitriol, see Copper Bulfate Bone Ash, 100 B keps . B 68 Black, 200 B bbls . B 68 Black, 200 B bbls . B 64 Black, 200 B bbls . B 64 Fowdered, 300 B bbls . B 68 Black, 200 B bbls . B 68 Brank, crys., 500 B bbls . B 68 Brownide, see potass. brownide etc Butter of Antimony, see Antimony Chlorids Butyl Acetate normal tk drs wks gal 1.42 Drums, le-I wks . gal 1.47 Secondary 80gal drums . gal 1.00 Aldehyde 50gal drs wks . B 70 Propionate, drs . B 34 Stearate 50gal drs . B 57 CADMIUM, metal 100 B bgs e-1 100 B Arsenate, 100 B bbls e-1 wks . B 70 Carbonate, 100 B bbls e-1 wks . B 657 Carbonate, 120 B dr e-I wks . B 653 Carbonate, 120 B dr e-I wks . B 653 Carbonate, 120 B dr e-I wks . B 653 Carbonate, 120 B dr e-I wks . B 653	: 2.00 : 2.10 : 2.25 : 2.35 : .33 : .07 : .08% : .05% : .05% : .12 : .1.45 : .1.47 : .1.50 : .1.45 : .1.47 : .1.50 : .1.45 : .75 : .36 : .60 :
ttil	BLEACHING POWDER, 700 B drs e-I whs contract .100 B e-I spot whs .100 B 300 B drs e-I whs centract 100 B e-I spot whs .100 B It-I 15c 100 bs differential Blues, bronne Chinese, Milori Prussian Soluble . B 30 Blue Vitriol, see Copper Bulfate Bone Ash, 100 B keps . B 68 Black, 200 B bbls . B 68 Black, 200 B bbls . B 64 Black, 200 B bbls . B 64 Fowdered, 300 B bbls . B 68 Black, 200 B bbls . B 68 Brank, crys., 500 B bbls . B 68 Brownide, see potass. brownide etc Butter of Antimony, see Antimony Chlorids Butyl Acetate normal tk drs wks gal 1.42 Drums, le-I wks . gal 1.47 Secondary 80gal drums . gal 1.00 Aldehyde 50gal drs wks . B 70 Propionate, drs . B 34 Stearate 50gal drs . B 57 CADMIUM, metal 100 B bgs e-1 100 B Arsenate, 100 B bbls e-1 wks . B 70 Carbonate, 100 B bbls e-1 wks . B 657 Carbonate, 120 B dr e-I wks . B 653 Carbonate, 120 B dr e-I wks . B 653 Carbonate, 120 B dr e-I wks . B 653 Carbonate, 120 B dr e-I wks . B 653	: 2.00 : 2.10 : 2.10 : 2.25 : 3.35 : .05 : .05 : .05 : .05 : .05 : .12 : .10 : .145 : .147 : .150 : .150 : .75 : .36 : .60 : .60 : .60 : .60 : .60 : .75
ttill seeddd	BLEACHING POWDER, 700 B dra el wha contract .100 B el spot whs .100 B 300 B dra el wha contract 100 B el spot whs .100 B les spot whs .100 B les spot wha .100 B el spot wha .100 B les spot spot Bulfate Bone Ash, 100 B kegs B Bone Ash, 100 B kegs B Bone Ash, 100 B begs B Black, 200 B bbls B Borax, cryw., 500 B Borax, cryw	: 2.00 : 2.10 : 2.10 : 2.25 : 2.35 : .03 : .07 : .08% : .05% : .05% : .12 : .10 : 1.45 : 1.47 : 1.50 : 1.05 : .75 : .36 : .60 : .75 : .36 : .60 : .75 : .350 % : .08% : .11 : .10
t til	BLEACHING POWDER, 700 B dra el wha contract .100 B el spot whs .100 B 300 B dra el wha contract 100 B el spot whs .100 B les spot whs .100 B les spot wha .100 B el spot wha .100 B les spot spot Bulfate Bone Ash, 100 B kegs B Bone Ash, 100 B kegs B Bone Ash, 100 B begs B Black, 200 B bbls B Borax, cryw., 500 B Borax, cryw	: 2.00 : 2.10 : 2.10 : 2.25 : 3.35 : .07 : .08½ : .05½ : .05½ : .05½ : .12 : .10 : 1.45 : 1.47 : 1.50 : 1.05 : .75 : .36 : .60 : .75 : .80 : .08½ : .08½ : .08½ : .08½ : .08½ : .08½ : .08½ : .08½ : .08½ : .08½ : .08½ : .08½
t till -ss eeddd	BLEACHING POWDER, 700 B dra el wha contract .100 B el spot whs .100 B 300 B dra el wha contract 100 B el spot whs .100 B les spot whs .100 B les spot wha .100 B el spot wha .100 B les spot spot spot spot spot spot spot spo	: 2.00 : 2.10 : 2.10 : 2.25 : 2.35 : .07 : .0834 : .0534 : .0534 : .12 : .10 : 1.45 : 1.47 : 1.50 : .105 : .75 : .36 : .60 : .75 : .35 : .60 : .60 : .75 : .35 : .0834 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110 : .110
t t t t t t t t t t t t t t t t t t t	BLEACHING POWDER, 700 B drs e-l was contract .100 B e-l spot whs .100 B 300 B drs e-l was centract 100 B e-l spot whs .100 B lc-l 15c 100lbs differential Blues, bronne Chinese, Millori Prussian Soluble B B 68 Black, 200 B bbls B 68 Black, 200 B bbls B 68 Black, 200 B bbls B 64 Powdered, 300 B bbls B 64 Powdered, 300 B bbls B 64 Powdered, 300 B bbls B 64 Rps 100-150 B B 68 Boronide, see potass. bromide etc Butter of Antimony, see Antimony Chieride Butyl Acetate normal th drs wks gal 1.42 Drums e-l wks gal 1.44 Drums, le-l wks gal 1.44 Secondary 50gal drums gal 1.47 Secondary 50gal drums gal 1.40 Propionate, drs B 70 Propionate, drs B 70 CADMIUM, metal 100 B bms B 70 CALCIUM Acetate 150 B bgs e-l 100 B Arsenate, 100 B bbls e-l wks B 075 Carbide, 220 B dr e-l wks B 075 Carbonate, tech 100 B bass e-l 100 B 100 UNF, precip, 175 B bbls B 62 Imp, Shipment 100 Imp e-l vf a 100 Imp, Shipment 100 Imp, Shipment 100 Imp e-l vf a 100 Imp e-l vf a 100 Imp e-l vf a 100 Imp, Shipment 100 Imp e-l vf a	: 2.00 : 2.10 : 2.10 : 2.25 : 3.35 : .07 : .08% : .05% : .05% : .12 : .10 : 1.45 : .1.47 : 1.50 : .1.60 : .60 : .75 : .86 : .60 : .75 : .86 : .80
t t t t t t t t t t t t t t t t t t t	BLEACHING POWDER, 700 B drs e-l was contract .100 B e-l spot whs .100 B 300 B drs e-l was centract 100 B e-l spot whs .100 B lc-l 15c 100lbs differential Blues, bronne Chinese, Millori Prussian Soluble B B 68 Black, 200 B bbls B 68 Black, 200 B bbls B 68 Black, 200 B bbls B 64 Powdered, 300 B bbls B 64 Powdered, 300 B bbls B 64 Powdered, 300 B bbls B 64 Rps 100-150 B B 68 Boronide, see potass. bromide etc Butter of Antimony, see Antimony Chieride Butyl Acetate normal th drs wks gal 1.42 Drums e-l wks gal 1.44 Drums, le-l wks gal 1.44 Secondary 50gal drums gal 1.47 Secondary 50gal drums gal 1.40 Propionate, drs B 70 Propionate, drs B 70 CADMIUM, metal 100 B bms B 70 CALCIUM Acetate 150 B bgs e-l 100 B Arsenate, 100 B bbls e-l wks B 075 Carbide, 220 B dr e-l wks B 075 Carbonate, tech 100 B bass e-l 100 B 100 UNF, precip, 175 B bbls B 62 Imp, Shipment 100 Imp e-l vf a 100 Imp, Shipment 100 Imp, Shipment 100 Imp e-l vf a 100 Imp e-l vf a 100 Imp e-l vf a 100 Imp, Shipment 100 Imp e-l vf a	: 2.00 : 2.10 : 2.10 : 2.25 : 2.35 : .07 : .08% : .05% : .05% : .12 : .10 : 1.45 : 1.47 : 1.50 : .105 : .75 : .36 : .60 : .75 : .36 : .08% : .08% : .10 : .110 : .120 : .130
t till ss eddd	BLEACHING POWDER, 700 B drs el was contract .100 B el spot whs .100 B 300 B drs el was centract 100 B el spot whs .100 B lc-1 15c 100 lbs differential Blues, bronne Chinese, Milori Prussian Soluble B .30 Blue Vitriel, see Copper Bulfate Bone Ash, 100 B kegs B .68 Black, 200 B bbls B .08 Black, 200 B bbls B .04 Powdered, 300 B bbls B .04 Powdered, 300 B bbls B .04 Powdered, 300 B bbls B .08 Bordeaux Mixture, 16% pd B .11 Paste, bbls B .08 Bromide, see potass. bromide etc Butter of Antimony, see Antimony Chloride Butyl Acetate normal th drs wis gal 1.42 Drums el-l wis gal 1.47 Secondary Sogal drums gal 1.47 Secondary Sogal drums gal 1.47 Secondary Sogal drums B .70 Propionate, drs B .34 Stearate 50gal drs B .34 Stearate 50gal drs B .70 CALCIUM Acetate 150 B bgs e-l Arsennte, 100 B bbls el-l whs B .05 Carbide, 220 B dr el-l whs B .05 Carbonate, tech 100 B bags e-l 100 B .05 Carbonate, tech 100 B bags e-l 100 B .05 Carbonate, tech 100 B bags e-l 100 B .05 Lums delvd. NY .100 B 100 Drums delvd. NY .100 B .204 Bass delvd NY .100 B .204	: 2.00 : 2.10 : 2.10 : 2.25 : 3.35 : .05 : .05 : .05 : .05 : .05 : .12 : .10 : .145 : .147 : .150 : .105 : .75 : .36 : .60 : .75 : .38 : .60 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .083 : .110 : .100 :
t t t t t t t t t t t t t t t t t t t	BLEACHING POWDER, 700 B dra el was contract 100 B el spot whs 100 B 300 b dra el wha centract 100 B el spot whs 100 B lel spot whs 100 B les 100 B differential Blues, bronne Chinese, Milori Frussian Soluble B Black, 200 B bbls B Black, 200 B bbls B Borax, crys, 500 B bbls B Borax, crys, 500 B bbls B Borax, crys, 500 B bbls B Powdered, 300 B bbls B Borax (crys, 500 B bbls B Butyl Acetate normal the dra whs gal 1.44 Drums, lel-1 whs gal 1.44 Drums, lel-1 whs gal 1.44 Drums, lel-1 whs gal 1.47 Secondary 50gal drums gal 1.00 Aldehyde 50gal dra whs B Tartrate dra B Too B Bormide, 100 B bbls el whs B Calbride, 220 B dr el whs B Carbonate, tech 100 B bags el el 100 B Carbonate, tech 100 B bags el el 100 B Carbonate, tech 100 B bags el el 100 B Carbonate, tech 100 B bags el el 100 B Carbonate, tech 100 B bags el el 100 B Carbonate, tech 100 B bags el el 100 B Carbonate, tech 100 B bags el el 100 B Carbonate, tech 100 B bags el el 100 B Carbonate, tech 100 B Drums delvd. NY 100 B Lagg delvd NY 100 B Drums delvd. NY 100 B Bags delvd NY 100 B Carbonate	: 2.00 : 2.10 : 2.10 : 2.25 : 2.35 : .07 : .08% : .05% : .05% : .12 : .10 : 1.45 : 1.47 : 1.50 : .105 : .75 : .36 : .60 : .75 : .36 : .08% : .08% : .10 : .110 : .120 : .130





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General Chemical Company's principal products include:

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(Chip Patented)
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ALUMINUM SULPHATE DISODIUM PHOSPHATE

ANHYDROUS BISULPHITE SODA

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BUFFALO · CHICAGO · CLEVELAND · DENVER EASTON · LOS ANGELES · PHILADELPHIA PITTSBURGH · PROVIDENCE · SAN FRANCISCO · ST. LOUIS

THE NICHOLS CHEMICAL CO., LTD., MONTREAL

Calcium Phosphate Dibutyl Phthalate			Chemicals	Dibutyl	Tartra Glyce	-	_
CALCIUM, Phos., tech450 m bbls m	.09 :	.10		Dibutyl Tartrate, 50gal drums In	.55		
Phosphate mono, 325 m bbls . m Stearate, bbls m	.07 :	.08	very strong due to the increasing consumption of acetic acid.	Dichlorobenzene, 1,000 lb drums lb Dichloromethane drums, wks lb	.23	. 2	5
Sulfocarbolate, 100 m kegs m	.53 :	.57		Diethylamine, 400 m drs m		3.1	
CAMPHOR, Amer. ref250 D bbls D	:	.72	Camphor-Movement of Japan-	Diethylaniline, 850 lb drs lb Diethyl Carbonate, drumsgal	1.85	3.0	0
2½ lb slabs, 100 lb cs lb	.69 :	.731/2	ese product is slow due to very	Diethyl Phthalate 1,000 drums . In	.25	.2	
Powdered	:	.80	many large consumers using syn-	Diethyl Sulfate tech., 50gal drs Ib Dimethylamine, 400 lb drs Ib		2.6	0
Carbon Bisulfide 500 m dr le-1 NY m	.051/4:	.56	thetic material.	Dimethylaniline 340 lb drs wks lb	.32		
c-1 drums NY	:	.0514	Carbon Tetrachloride-No shad-	Dimethylsulfate, 100 m drs m Dinitrobenzene, 400 m bbls m	.151/2		61/4
Carbon Black, c-l wks bags ID 100-300 ID cases lc-l NY . ID	.08 :	.12	ing of schedule prices has oc-	Dinitrochlorobenzene, 400 m bbls m Dinitrochlorine, 300 m bbls m	.15		
Decolorizing 40 m bags c-l m	.08 :	.15%	curred and demand is normal.	Dinitronaphthalene, 350 m bbls . m	.32	: .3	4
90 lb drums c-l lb Carbon Dioxide, Liquid 20-25 cy lb	.0814:	.06	Casein-Importers are now quot-	Dinitrophenol, 350 m bbls m Dinitrotoluene, 300 m bbls m	.18	.3	
Tetrachloride, 1400 lb drs del lb	.07 :	.073/	ing 15½c@15%c to for spot par-	Diorthotolylguanidine, 275 B			
Drums c-I delivered D Casein, edib., 100 D keps D	.45	.65	cels. Consumers are showing but	bbls wks		1.0	
Standard ground ID	.15%:	.16	routine interest.	Diphenylguanidine 100 h bbls h	.80		
Caustic Potash see potash, caustic Soda, see soda, caustic			Chlorine-Makers report a move-	EPSOM SALT, tech., 300 h bbls			
Cellulose Acetate, 50 lb kegs b	.33 :	1.40	ment of steadily increasing volume,	NY100 B		: 2.0 : 1.7	
Cerium Oxalate USP, 100 lb keps lb Chalk, drop 175 lb bbls lb	.03 :	.03%	and report this as the firmest item	Bbls e-l NY100 m 100 m e-l NY 100 m	1.50	: 1.7	5
Precip., light 250 lb bbls cake lb	.0214	.041/2	that they manufacture.	Imp., 20 lb bags e-l USP, 200 lb bbls 10bbls Seaboard	1.05	: 1.1	0
Precip., heavy 560 lb casks lb Bulk		5.00	Chloroform-Makers are quoting			: 2.3	
Precip, English 7 h bags h	.031/4:	.081/2	unchanged prices, although supplies	Interior		: 2.5	0
Precip., heavy 560 m casks m Chinese Blue, See Blue			continue to be sold by second hands			: 2.1	
Chloramine USP, 200 b bbls b	.55 :		at lower figures.	Interior100 m Imported, 400 m bbls .100 m		: 2.2 : 2.0	
Chlorocosane 5 lb bot lb Chlorhydrin, Ethylene See Ethylene			Copper Sulfate-Makers quote un-	ETHER, USP, 55 m drums m	1.10		
CHLORINE, Liquid tank or multi-			changed prices of \$4.75 100 lbs. for	Ethyl Acetate, 99% 50gal drs gal		: 1.0	
unit car was contract . In	:	.04%	carlots of large crystals and abso-	35% Ester, 10gal drsgal Carlots drumsgal		: .7	
Tank car spot wks D Carlots cyl wks contract D	:	.05%	lutely no cutting has occurred for	Tank carsgal		: .7	
spot wks ID	.08 :	.0534	many months past. This is the	Refined drumsgal Aceto Acetate drums wkslb		: 1.8	
le-l cyl wks contract ID Spot wks ID	.0814:	.0914	longest time in many years that this	Benzyl Aniline, 300 b drs b	1.05	: 1.0	
Chlorobenzene, mono, 100 m drs	:	.07	market has been maintained at a firm price. The use as a flotation	Bromide, 115 lb drs lb Chloride, 200 lb drs lb		: .5	
	:	.30	reagent is largely responsible for	Lactate drums wksgal		: 8.5	
Second hands 650 m drs m	.271/2:	.281/2	this condition.	Methyl Ketone, 50gal drs Ib Oxalate drums wks Ib		: nor	
Technical 1,000 D drums Ib	.20 : 3.75 :	4.00		Ethylene-Bromide 600 m drs m			70
Chlorophyll Oil Sol D Water Sol D	75 :		Copperas—Usual conditions exist. Large makers report no difficulty in	Chlorhydrin, anhyd., 50gal drs Ib 40% Solution, 50gal bbls Ib	.75		85 30
Chromium Acetate 20° sol'n 400 m bbls	:	.05%	moving their entire production, but	Dichloride, 50 gal drs To		: .1	11
Fluoride, Powd., 400 m bbls m	.27 :	.28	excess supplies from smaller fac-	Tank cars	.30		06 40
Oxide, Green bbls	.26 :	.351/2	tors cause unsettlement from time	Tri Chloride	.10	: .:	101/2
Chrome Green, CP	.06%:	.11	to time.	Ethylidenaniline		: 25.0	65 00
Chrome Vellow ID	.17 :	.181/2	Dimethylaniline-No unsettle	FERRIC CHLORIDE tech., erys.			
Clay c-1 Bulk, Del.,ton Powdered 125 lb bagston	10.00	20.00	ment is apparent and all large con-	475 D bbls D	.0714		09
Coal Tar. See Tars			sumers are under contract at firm	Imported	.043/	: .1	05 10
Cobalt metal 100 m kees m Cobalt Oxide 500 m bbls m	2.50 :	2.10	prices.	Neut. Soln. 42° 140 m chys m	.06		06 1/4 07
10 m tins 200 m cases m	:	2.20	Diorthotolylguanidine - Since the	460 140 m cbys m	.08	: .	0834
COPPER, metal electrolytic100 m Lake c-l NY100 m	12.50 :	12.62%	recent decline to \$1.00@\$1.05 tb	UNP, Soln 125 lb cbys lb Bromide solution lb	.063		07 55
Carbonate 400 m bbls m	.16%:	.17%	there has been little activity in the	Ferrous Bromide sol'n Ib		: .	55
Chloride 250 m bbls m Cyanide 100 m drs m	.48		market.	Chloride cryst tech 475 m bbls m Sulfide 1000 m bbls100 m	2.50		06
Oxide, red 100 h bbls tons h	.161/2:	.17	Diphenylguanidine - Manufactur-	Fiske-White see lead White	2.00		
Sub-acetate verd 440 m bbls m SULFATE crys 450 m bbls 100 m	4.90		ers reduced the price last month to	Fillorspar, 95% 220 h bam er-		: 25.	00
Carlots, bbls wks .100lbs		4.75	80c@85c tb. Sales are in fair vol-	98% bagston		: 33.	50
Powd. 350 lb 5bbls100 lb		5.25	ume.	98% bagston		: 35.	00
Copperas bulk, crystal and sugar		: 13.00	Epsom Salts-Market remains	FORMALDEHYDE USP, 400 ID bbls		: .	114
200 lb bgs e-1 wkston		15.00	quite steady under good demand	Bbls 400 lb lc-1 wks lb	.113	4: .	115
Powdered bbls100 lb		: 18.00 : 2.00	Imported technical material remains	Formaldehyde Aniline 100 m drs m Furfural 500 m drums			.173
Sugar, 100 m bbls100 m		1.35	available at \$1.05 100 lbs.	Tanks, wks			.15
Cotton Soluble 100 m bbls wet m		.42	Glauber's Salt-Demand is good	Fusel 0il 10% Impurities drs gal		: 1.	.60
CREAM TARTAR, USP, 300 h	.23	2214	but supplies remain large and selling	I to SALI DENTE 300 ID DDIE DENTE			.52
Imp., powd., USP, 224 bbls Ib	.211/2	.22	pressure keeps prices at a low point				
Cressote USP 42 lb cbys lb		: .42	Glycerin-Market is weak. De	e-1 whs100 Th	1.05	: 1	
Crecoote Oil Natural 50gal drsga 10-15% Tar acidga		: .21 : .26	mand and inquiries have been light	10-1 WAS		: 1.	
25-30% Tar acid	1 .28	: .29	Offers of goods have been made a	Bbls le-l wks100 m	1.25	: 1	.35
Cresol, USP, 400 D drums R		: pem.	25c to for FebMarch, and bids are	I Imported back NY	.75	:	.86
Cyclohexanol, see Hexalene Cymene Ree Para-Cymena			being solicited at 24c fb. Candle		.29	: .	.30
DIAMINOPHENOL, 100 D. kegs R		: 3.80	and soap trades in Europe are re	Cans, 50 D		:	.31
Diamyl Phthalate drums, was	1 2.95	: 2.97 : 3.35	ported to be having poor busines	Depotition terms			.20
Dianisdine, 100 b kegs			with consequently small glyceria	11 Soap, Lye tanks		:	.18



This mill uses EBG Liquid Chlorine

MUNISING PAPER COMPANY Munising, Michigan

IQUID Chlorine has played a valuable economic role in the plant of the Munising Paper Company, Munising, Mich., as it has in every mill that has installed it.

Such advantages as full strength solutions, ease of control, an increase in bleaching production, and cleanliness of operation, assure satisfaction.

Single-unit tank cars holding approximately 30,000 pounds, and multi-unit tank cars consisting of 15 one-ton containers, offer the large user of EBG Liquid Chlorine every possible advantage.



SINGLE-UNIT TANK CAR



MULTI-UNIT TANK CAR

EBG SERVICE

Includes abundant production facilities and container equipment, of course; expert engineering counsel in the use of Liquid Chlorine which would naturally be expected of the pioneer manufacturer. But beyond these a service which is much more comprehensive than the usual conception. Investigation will reveal the significance of this.



Electro Bleaching Gas Co.

PIONEER MANUFACTURERS of LIQUID CHLORINE

Plant: NIAGARA FALLS, N.Y.

Main office 9 East 41 5 Street New York

Hexalene Manganese Sulfate			
Hexalene, 50gal drs., wks D		:	.45
Hexamethylenetretramine drs Ib			
HYDROGEN PEROXIDE, 10 vol			
400 m bbls	.043		.05 .06¾ .06½ .06¾
15vol	.063		.061/4
25vol	.061	4:	.06%
100vol 140 lb cbrs lb	.00		
10DINE, crude 200 m kegs m	4.20	:	4.25
Iridium, metal, 1002 lots	000	**	200.00
Iron, metal by hydrogen 1 h bot h	.68	:	.70
IRON Chloride see Ferric or Ferrous			
Nitrate, kegs	.09	:	.10
		:	.0314
Oxide, red Spanish ID English ID	.10	:	.12
Perchloride ,see Ferric Chloride Isopropyl Acetate 50gal drums gal	9.6		90
Kaolin see Clay	.09	۰	.00
LANGLIN, see Adeps Lanae			
LEAD, metal c-l FY100 To		0	7.40
Acetate, white crystals100 lb bbls wks100 lb	14.00	:	14.50
White, broken bbls wks 100 th White, gran bbls wks 100 th White, gran bbls wks 100 th Brown, broken bbls wks 100 th	14.50	*	15.00
White, broken bbls wks .100 lb	14.50		15.00
White, powd bbls wks .100 fb	14.75	:	15.25
Brown, broken bbls wks 100 h	13.00		13.50
Arsenate, 100 lb kegs lb Bbls., c-l wks lb Bbls., lc-l wks lb Paste, 100 & 600 lb bbls lb Paste, 100 & 600 lb bbls lb Nitrate, 500 lb bbls lb Oxide Litharge 500 lb bbls lb 100 kegs wks lb 100 lb kegs wks lb 100 lb kegs wks lb White, basic carb., 500 lb bbls wks lb 100 lb kegs wks lb White sulfate 500 lb bbls wks lb			.15
Bbls. le-1 wks	.151/	:	.16
Paste, 100 & 600 m bbls m	.08	:	.09
Nitrate, 500 fb bbls wks fb		:	.14
Oxide, Litharge 500 lb bbls. lb	1436		.1534
Oxide, red. 500 lb wks lb		:	.10%
100 lb kegs wks	.12%	:	.16%
Oleate, bbls	.17%	:	.18
White basic carb 500 bbls	.20		.00
wks			.093/4
100 fb kegs wks	.14%	:	.15%
White sulfate 500 m bbls was in	.09	0	.00 75
LIMP (SAITS, see Calcium Saids)			
Live, bulk		:	8.50
Ground Stone, bagston Live, bulkton Live, 325 lb bbls tons wks 100 lb		0 0	1.05
Single bhi wks			.01
wiss		:	.03 1/4
Sulfur dry 200 lb drs NY lb		:	.081/4
Drs. c-1 NY ID	.15		.1534
Litharge see lead daide			
Lichium Carb., USP 100 lb kegs lb	1.48		1.60
Bromide 100 m cs m	1.80	:	1.90
Lithopone, 400 m bbls lc-l wks m Bbls., c-l wks		:	.061/2
Bbls., c-1 wks		:	.05 %
Bags e-l wks	.0534		.06
MAGNESITE, calcined, 500bbls ton	48.00		50.00
Magnesium mtl., sticks 100 b es			
Magnesium mtl., sticks 100 lb es Carb., tech., 70 lb bags NY lb	.06 .08		.061/2
USP, 100 fb bbls fb	.0934		.081/2
Engilsh os blocks Ib	.17	:	.19
MACNESIUM. Chloride. flake 575 To			
drs. c-l wkston Imp., Flake Shiptton			37.00
Imp., Flake Shipt ton			33.00
Fluosilicate cryst400 lb bbls wks lb	.10		.101/2
Sol'n bble all who	.07	:	.07 1/2
Fluosilicate cryst400 lb bbls wks lb 30% sol'n 500 lb bbls wks . lb Sol'n. bbls., c-1 wks lb Oxide, USP, light 100 lb bbls lb		:	.42
Oxide, USP, light 100 lb bbls lb USP, heavy 250 lb bbls lb Salicylate, 100 lb kegs lb Stearate bbls lb			.50
Salicylate, 100 h kegs h	.75		.80
Stearate bbls	.23	:	.25
Sulfate, see Epsom Salts			
Manganese Borate, 30% 200 b bbls		:	.24
100 m kegs m			.25
Chloride, 600 m csks m			.081/2
Dioxide, 80-84% 900 bbls	90.00		05.00
NYton 85-90% 900 m bbls NYton	80.00		90.00
Hydrated, precip 100 m kers m	.15		0.0
Hydrated, precip 100 lb kegs lb ore, bulk cif NY	.35	:	.40
Buildie, boilth drums NV B	0.7		071/

Chemicals

Mercury Para-Phenetidin

production. Saponification is selling at below 20c fb, with buyers viewing the market at 19½c fb. Lye at 17½c fb is not finding takers. Official quotation on C.P. has been reduced to 28c fb but this price is being shaded quite generally.

Hydrogen Peroxide—In slight demand due to the fact that the white goods season has not as yet opened up.

Lead, Red—Unchanged this week as is litharge. The movement at the moment is very routine.

Mercury—Demand is fair and market is strong although selling competition has kept the market from advancing as predicted by some factors. Quotations are given at \$102@\$103 flask.

Meta-Nitro-Para-Toluidine - 1n steady demand and firm at \$1.70 lb.

Methanol—Market remains strong in all directions but prizes do not advance owing to the fact that any further advance would drive them above costs of imported material. Rumors connect the ammonia plant that is to be shut down shortly with subsequent production of synthetic methanol, but no confirmation can be obtained.

Naphthalene—With the Spring approaching this item is becoming increasingly active.

Ortho-Toluidine—Market is very firm due to increasingly heavy demand and makers unwilling to increase output very much owing to the limited consumption of paratoluidine. An advance in price is quite likely if any new business is to be taken on by makers.

Para-Nitroaniline—All makers report a firm market at unchanged prices. Demand is of increased volume.

Para-Toluidine—Market remains very weak with sales made at 40c to and below although open quotations remain at 45c tb. Stocks are very large and the steadily increasing demand for ortho-toluidine only tends to increase them.

Phenol—Demand is steady but potential production is large. Prices are unchanged but most makers would like to increase their outlet even at a slight concession in price.

Phthalic Anhydride—In steady routine demand from makers at firm unchanged prices.

1			
	MERCURY, metal 75 lb flask flask102.00 Meta-Nitro-aniline		103 00
	Meta-Nitro-aniline	2	.74
4	Meta-Nitro-para-Toluidine, 200 lb		
	bbls	:	1.70
1	Meta - Phenylenediamine, 363 lb		
	bbls	:	.94
U	Meta - Toluvlenediamine 300 h		
	bols	:	.74
	Tanks	:	.70
1	METHANOL (Wood Alcohol) drms.		
		:	.80
-	Deume e.l gel		99
1	95% gal Drums, c-l gal Drums, lc-l gal		.85
ı	Drums, 1c-1 gai 97% tanks gal Drums, c-1 gal Drums, 1c-1 gal Drums, 1c-1 gal Drums, 1c-1 gal gal Drums, 1c-1 gal gal Drums, 1c-1 gal		89
1	Drume a-l gal		9.6
Ì	Drume le-1 mal		97
	Pure Acatona fron tanks cal		.87
			.00
	Drums, c-lgal Drums, lc-lgal		.90
1	U. S. denat., grd., tanksgal	-	.80
-	Drums, c-lgal		.00
	Mothyl Asstate dwams and		.00
. 1	Mathyl Acatona 100ml days and 00		.93
1	Tank come	-	.90
1	Methyl Acetate drums gal Methyl Acetone, 100gal drums .gal .88 Tank cars .gal Chloride, 90 fb eyl .gal .55		.85
1	Monohromohenzana Saa Branch gal .55	:	.60
	Monobromobenzene See Bromobenzene Monacetine, See Acetine		
-	Manachlarobonzone and Chlarobonzone		
1	Monochlorobenzene, see Chlorobenzene		
1	Monethylaniline, 900 b drs b	0	1.05
ĺ,	Monomethyl paraminophenol sulfate		
-	100 lb drs lb 3.95		4.20
1	NAPHTHA, see Solvent Naphtha		
1	NAPHTHALENE Wicks 175 th bhis		
1	marinimatent, FISKE, 170 ID DDIS		0.5
	Palle 950 h wks	2:	.00
1	wks ID .04 ½ Balls, 250 lb wks .05 ½ Crushed, chipped bgs wks Crude, imp., bags .02	2:	04.14
1	Crude imp have 75 00		091/
1	Crude, 1mp., bags 10 .02		.02 74
1	NICKEL Ingot 100 m kegs	*	.35
1	Chloride, bbls kegs		.24
1	Oxide, 100 lb kegs NY		.38
1	Salt single 400 lb bbls NY lb .08		.081/2
1	Double 400 m bbls NY m .08 %	4:	.09
1	Sulfate, See Nickel Salt single		
1	Nickel Metal, electrolytic 100 m		84.06
1	Nicotine, Free, 40 % 8 lb tins cs Tb 1.25	0	1.30
1	Sulfate, See Nickel Salt single Nickel Metal, electrolytic 100 lb Nicotine, Free, 40 % 8 lb tins cs lb 1.25 Nicotine Sulfate 10 lb tinslb		1.10
1			
J			
	NITRATE SODA, spot, See Sodium Nitrate		
	NITRATE SODA, spot, See Sodium Nitrate Nitre Cake, bulk wks		
	Nitre Cake, bulk wkston 4.50	:	5.50
	Nitre Cake, bulk wkston 4.50	:	5.50
	Nitre Cake, bulk wkston 4.50	:	5.50
	Nitre Cake, bulk wks	:	5.50
	Nitre Cake, bulk wks ton 4,50 500 fb bbls ton 13.00 Nitrobenzene, Redishilled 1000 fb ton 13.00 Nitronaphthalene, 550 fb bbls . fb Nitrotaphthalene, 550 fb bbls . fb Nitrotaphthalene, mixed 1,000 fb drs	4:	5.50 14.00 .10 ¹ / ₄ .25
	Nitre Cake, bulk wks ton 4,50 500 fb bbls ton 13.00 Nitrobenzene, Redishilled 1000 fb ton 13.00 Nitronaphthalene, 550 fb bbls . fb Nitrotaphthalene, 550 fb bbls . fb Nitrotaphthalene, mixed 1,000 fb drs	4:	5.50 14.00 .10 ¹ / ₄ .25
	Nitre Cake, bulk wks	4:	5.50 14.00 .10 ¹ / ₄ .25
	Nitre Cake, bulk wks ton 4,50 500 fb bbls ton 13.00 Nitrobenzene, Redis#illed 1000 fb 090 fb 090 fb Nitronaphthalene, 550 fb bbls fb Nbls Nitrotoluene, mixed 1,000 fb drs wks 01 Fusel, See Fusel 61 fb 14	4::	5.50 14.00 .101/4 .25
	Nitre Cake, bulk wks ton 4,50 500 fb bbls ton 13.00 Nitrobenzene, Redis#illed 1000 fb drs. wks fb Nitronaphthalene, 550 fb bbls fb Nitrotoluene, mixed 1,000 fb drs wks fb 14 01l Fusel, See Fusel 01l 14	4::	5.50 14.00 .101/4 .25
	Nitre Cake, bulk wks ton 4,50 500 fb bbls ton 13.00 Nitrobenzene, Redis#illed 1000 fb drs. wks fb Nitronaphthalene, 550 fb bbls fb Nitrotoluene, mixed 1,000 fb drs wks fb 14 01l Fusel, See Fusel 01l 14	4::	5.50 14.00 .101/4 .25
	Nitre Cake, bulk wks ton 4,50 500 fb bbls ton 13.00 Nitrobenzene, Redis#illed 1000 fb drs. wks fb Nitronaphthalene, 550 fb bbls fb Nitrotoluene, mixed 1,000 fb drs wks fb 14 01l Fusel, See Fusel 01l 14	4::	5.50 14.00 .101/4 .25
	Nitre Cake, bulk wis	4::	5.50 14.00 .101/4 .25
	Nitre Cake, bulk wks	4::	5.50 14.00 .101/4 .25
	Nitre Cake, bulk wks	4::	5.50 14.00 .10¼ .25 .15 .14½ .14¾ 2.25 2.50
	Nitre Cake, bulk wks	4::	5.50 14.00 .101/4 .25 .15 .141/2 .2.25 2.50
	Nitre Cake, bulk wks	4::	5.50 14.00 .101/4 .25
	Nitre Cake, bulk wks	4:	5.50 14.00 .101/4 .25 .15 .141/2 .143/4 2.25 2.50
	Nitre Cake, bulk wis ton 4,50 500 fb bbls ton 13.00 Nitrobenzene, Redishilled 1000 fb 1000 fb drs. wks fb .093 Nitronaphthalene, 550 fb bbls fb Nitrotoluene, mixed 1,000 fb drs wks fb .14 011 Fusel, See Fusel 01 01 011 Mirbane, See nitrobenzene 0range Mineral, 1100 fb csks NY fb 070 fb bbls NY fb 700 fb bbls NY fb 0rtho-Aminophenol, 50 fb kegs fb 2.20 0rtho-Nitrobenzene, see Ditchlorbenzene 0rtho-Nitroblorbenzene, see 10 fb fb 2.35 0rtho-Nitrophenol, 350 fb fb 32 0rtho-Nitrophenol, 350 fb fb 1.30 0rtho-Nitrophenol, 350 fb fb 1.35	4::::::::::::::::::::::::::::::::::::::	5.50 14.00 .10½ .25 .15 .14½ .2.25 2.50 .35 .90
	Nitre Cake, bulk wks	4::::::::::::::::::::::::::::::::::::::	5.50 14.00 .10½ .25 .15 .14½ .2.25 2.50 .35 .90
	Nitre Cake, bulk wis	4:: : : : : : : : : : : : : : : : : : :	5.50 14.00 .101/4 .25 .15 .141/2 .143/4 2.25 2.50 .35 .90 .14 .27
	Nitro Cake, bulk wks ton 4,50	4:: : : : : : : : : : : : : : : : : : :	5.50 14.00 .10¼ .25 .15 .14½ .2.25 .2.50 .35 .90 .14 .27 81.00
	Nitre Cake, bulk wks	4:: : : : : : : : : : : : : : : : : : :	5.50 14.00 .101/4 .25 .15 .141/2 .143/4 2.25 2.50 .35 .90 .14 .27 81.00 1.05
	Nitre Cake, bulk wks	4: : : : : : : : : : : : : : : : : : :	5.50 14.00 .101/4 .25 .15 .141/2 .2.25 .2.50 .35 .90 .14 .27 81.00 1.05 1.15
	Nitre Cake, bulk wks	4: : : : : : : : : : : : : : : : : : :	5.50 14.00 .101/4 .25 .15 .141/2 .143/4 2.25 2.50 .35 .90 .14 .27 81.00 1.05
	Nitre Cake, bulk wks	4:	5.50 14.00 .101/4 .25 .15 .141/2 .143/4 2.25 2.50 .35 .90 .14 .27 81.00 1.05 1.15
	Nitro Cake, bulk wks	4:	5.50 14.00 .101/4 .25 .15 .141/2 .2.25 .2.50 .35 .90 .14 .27 81.00 1.05 1.15 1.30
	Nitre Cake, bulk wks	4:	5.50 14.00 .10¼ .25 .15 .14½ .2.25 .2.50 .35 .90 .14 .27 81.00 1.05 1.15 1.30
	Nitre Cake, bulk wis	4::	5.50 14.00 .1034 .25 .15 .1434 .2.25 .2.50 .35 .90 .14 .27 81.00 1.05 1.15 1.30
	Nitro Cake, bulk wks	4::	5.50 14.00 .101/4 .25 .15 .141/2 .2.25 .2.50 .35 .90 .14 .27 81.00 1.05 1.15 1.30
	Nitre Cake, bulk wks	4: : : : : : : : : : : : : : : : : : :	5.50 14.00 .10¼ .25 .15 .14½ .2.25 .14¾ .2.25 .50 .35 .90 .14 .27 81.00 1.05 1.15 1.30 .20 .21 .28 2.50
	Nitre Cake, bulk wks ton 4.50 500 lb bbls ton 13.00 Nitrobenzene, Redistilled 1000 lb drs. wks lb Nitronaphthalene, 550 lb bbls lb Nitrotoluene, mixed 1,000 lb drs wks lb ld Oil Fusel, See Fusel Oil Oil Mirbane, see nitrobenzene Orange Mineral, 1100 lb csks NY lb Ortho-Aminophenol, 50 lb kegs lb Ortho-Aminophenol, 50 lb kegs lb Ortho-Anisidine, 100 lb drs lb Ortho-Nitrotoluene, see Dichlorbenzene Ortho-Nitroblorobenzene, 1,200 lb drs lb Ortho-Nitrotoluene, 1,000 lb drs wks lb 32 Ortho-Nitrotoluene, 1,000 lb drs wks lb 32 Ortho-Nitrotoluene, 1,000 lb drs wks lb 32 Ortho-Toluidine 350 lb bbls lb 25 PALLADIUM, metal 100z lots oz. 80.00 Para-Aminoacetanilld, 100 lb kegs lb Hydrochloride, 100 lb kegs lb Hydrochloride, 100 lb kegs lb 17 25-50 lb kegs lb 17 25-50 lb kegs lb Paraldebyde 110-55gal drs USP tech lb 26 Parargormaldebyde USP 100 lb cs lb 52 Paraprormaldebyde USP 100 lb cs lb 52 Paraprormaldebyde USP 100 lb cs lb 55	4: : : : : : : : : : : : : : : : : : :	5.50 14.00 .1034 .25 .15 .14½ .1434 .2.25 .2.50 .35 .90 .14 .27 81.00 .1.05 .1.15 .30 .20 .21 .28 .53½
	Nitro Cake, bulk wks	4:	5.50 14.00 .101/4 .25 .15 .141/2 .143/4 2.25 2.50 .35 .90 .14 .27 81.00 1.05 1.15 1.30 .20 .21 .28 2.50 .531/2 .55
	Nitre Cake, bulk wks ton 4.50 500 lb bbls ton 13.00 Nitrobenzene, Redistilled 1000 lb drs. wks lb Nitronaphthalene, 550 lb bbls lb Nitrotoluene, mixed 1,000 lb drs wks lb ld Oil Fusel, See Fusel Oil Oil Mirbane, see nitrobenzene Orange Mineral, 1100 lb csks NY lb Ortho-Aminophenol, 50 lb kegs lb Ortho-Aminophenol, 50 lb kegs lb Ortho-Anisidine, 100 lb drs lb Ortho-Nitrotoluene, see Dichlorbenzene Ortho-Nitroblorobenzene, 1,200 lb drs lb Ortho-Nitrotoluene, 1,000 lb drs wks lb 32 Ortho-Nitrotoluene, 1,000 lb drs wks lb 32 Ortho-Nitrotoluene, 1,000 lb drs wks lb 32 Ortho-Toluidine 350 lb bbls lb 25 PALLADIUM, metal 100z lots oz. 80.00 Para-Aminoacetanilld, 100 lb kegs lb Hydrochloride, 100 lb kegs lb Hydrochloride, 100 lb kegs lb 17 25-50 lb kegs lb 17 25-50 lb kegs lb Paraldebyde 110-55gal drs USP tech lb 26 Parargormaldebyde USP 100 lb cs lb 52 Paraprormaldebyde USP 100 lb cs lb 52 Paraprormaldebyde USP 100 lb cs lb 55	4:	5.50 14.00 .10¼ .25 .15 .14½ .2.25 .14¾ .2.25 .35 .90 .14 .27 81.00 1.05 1.15 1.30 .20 .21 .28 2.50 .53½ .55
	Nitro Cake, bulk wks	4:	5.50 14.00 .10¼ .25 .15 .14½ .2.25 .14¾ .2.25 .35 .90 .14 .27 81.00 1.05 1.15 1.30 .20 .21 .28 2.50 .53½ .55
	Nitre Cake, bulk wks	4:	5.50 14.00 .10¼ .25 .15 .14½ .2.25 .14¾ .2.25 .35 .90 .14 .27 81.00 1.05 1.15 1.30 .20 .21 .28 2.50 .53½ .55
	Nitre Cake, bulk wks	4:	5.50 14.00 .10¼ .25 .15 .14½ .2.25 .15 .35 .90 .14 .27 81.00 1.05 1.15 1.30 .20 .21 .28 2.50 .53½ .55
	Nitro Cake, bulk wks	4:	5.50 14.00 .10¼ .25 .15 .14½ .2.25 .15 .35 .90 .14 .27 81.00 1.05 1.15 1.30 .20 .21 .28 2.50 .53½ .55
	Nitre Cake, bulk wks ton 4.50 500 b bbls ton 13.00 Nitrobargene, Redistilled 1000 lb drs. wks lb	4: : :: :: :: :: :: :: :: :: :: :: :: ::	5.50 14.00 .101/4 .25 .15 .141/2 .2.25 .2.50 .35 .90 .14 .27 81.00 1.05 1.15 1.30 .20 .21 .28 2.50 .53 ½ .55 .55
	Nitre Cake, bulk wks ton 4.50 500 lb bls ton 13.00 Nitrobenzene, Redistilled 1000 lb drs. wks lb Nitrobenzene, Redistilled 1000 lb drs. wks lb Nitrobenzene, mixed 1,000 lb drs wks lb Nitrotoluene, mixed 1,000 lb drs wks lb 14 0il Fusel, See Fusel 0il 0il Mirbane, see nitrobenzene 0range Mineral, 1100 lb csks NY lb 0rtho-Aminophenol, 50 lb kegs .lb 2.20 0rtho-Anisidine, 100 lb 0rtho-Anisidine, 100 lb 0rtho-Nitroblorobenzene, 1,200 lb 0rs .wks lb 0rtho-Nitroblorobenzene, 1,200 lb 0rs .wks lb 13 0rtho-Nitroblorobenzene, 1,000 lb 0rs .wks lb 13 0rtho-Nitroblorobenzene, 1,000 lb 0rs .wks lb 13 0rtho-Toluidine 350 lb bls lb 13 0rtho-Toluidine 350 lb bls lb 125 PALLADIUM, metal 100z lots 0z, 80,00 Para-Aminoacetanilld, 100 lb kegs .lb 1.00 Para-Aminophenol, 100 lb kegs .lb 1.25 Para-Dichlorbenzene, 150 lb 125 Para-Dichlorbenzene, 150 lb 17 225-50 lb kegs .lb 1.7 225-50 lb kegs .lb 1.7 226 Para-Introacetanilld, 300 lb bbls lb 18 Para-Nitroacetanilld, 300 lb bbls lb 19 Para-Nitroacetanilld, 300 lb bbls lb 19 Para-Nitroacetanilld, 300 lb bbls lb 19 Para-Nitroacetanillo, 300 lb bbls lb 19 Para-Nitroacetanillo, 300 lb bbls lb 10 Para-Nitroacetanillo, 300 lb bbls lb 10 Para-Nitroacetanillo, 300 lb bbls lb 10 Para-Nitroacetanillo, 300 lb 10 Para-Nitroaceta	4:: : : : : : : : : : : : : : : : : : :	5.50 14.00 .10¼ .25 .15 .14½ .14¾ .2.25 .2.50 .35 .90 .14 .27 81.00 .1.05 .1.15 .1.30 .20 .21 .28 .250 .53½ .555 .55
	Nitre Cake, bulk wks ton 4.50 500 lb bls ton 13.00 Nitrobenzene, Redistilled 1000 lb drs. wks lb Nitrobenzene, Redistilled 1000 lb drs. wks lb Nitrobenzene, mixed 1,000 lb drs wks lb Nitrotoluene, mixed 1,000 lb drs wks lb 14 0il Fusel, See Fusel 0il 0il Mirbane, see nitrobenzene 0range Mineral, 1100 lb csks NY lb 0rtho-Aminophenol, 50 lb kegs .lb 2.20 0rtho-Anisidine, 100 lb 0rtho-Anisidine, 100 lb 0rtho-Nitroblorobenzene, 1,200 lb 0rs .wks lb 0rtho-Nitroblorobenzene, 1,200 lb 0rs .wks lb 13 0rtho-Nitroblorobenzene, 1,000 lb 0rs .wks lb 13 0rtho-Nitroblorobenzene, 1,000 lb 0rs .wks lb 13 0rtho-Toluidine 350 lb bls lb 13 0rtho-Toluidine 350 lb bls lb 125 PALLADIUM, metal 100z lots 0z, 80,00 Para-Aminoacetanilld, 100 lb kegs .lb 1.00 Para-Aminophenol, 100 lb kegs .lb 1.25 Para-Dichlorbenzene, 150 lb 125 Para-Dichlorbenzene, 150 lb 17 225-50 lb kegs .lb 1.7 225-50 lb kegs .lb 1.7 226 Para-Introacetanilld, 300 lb bbls lb 18 Para-Nitroacetanilld, 300 lb bbls lb 19 Para-Nitroacetanilld, 300 lb bbls lb 19 Para-Nitroacetanilld, 300 lb bbls lb 19 Para-Nitroacetanillo, 300 lb bbls lb 19 Para-Nitroacetanillo, 300 lb bbls lb 10 Para-Nitroacetanillo, 300 lb bbls lb 10 Para-Nitroacetanillo, 300 lb bbls lb 10 Para-Nitroacetanillo, 300 lb 10 Para-Nitroaceta	4:: : :: :: :: : : : : : : : : : : : :	5.50 14.00 .10¼ .25 .15 .14½ .14¾ .2.25 .2.50 .35 .90 .14 .27 81.00 .1.05 .1.15 .1.30 .20 .21 .28 .250 .53½ .555 .55
	Nitre Cake, bulk wks	4:: : :: :: :: : : : : : : : : : : : :	5.50 14.00 .101/4 .25 .15 .141/2 .245 .2.25 .2.50 .35 .90 .14 .27 81.00 1.05 .1.15 1.30 .20 .21 .28 2.50 .53 1/2 .55 .55 .53 .32 2.85
	Nitre Cake, bulk wks ton 4.50 500 b bbls ton 13.00 Nitrobenzene, Redistilled 1000 lb drs. wks lb	4:: : : : : : : : : : : : : : : : : : :	5.50 14.00 .10¼ .25 .15 .14½ .14¾ .2.25 .2.50 .35 .90 .14 .27 81.00 .1.05 .1.15 .1.30 .20 .21 .28 .55 .55 .55 .53 .32 .85 .55
	Nitre Cake, bulk wks	4:: : :: :: :: : : : : : : : : : : : :	5.50 14.00 .101/4 .25 .15 .141/2 .2.25 .2.50 .35 .90 .14 .27 81.00 1.05 .1.15 1.30 .20 .21 .28 2.50 .53 ½ .55 .55 .53 .32 2.85

Phthalic Anhydride



Highest quality obtainable.

Guaranteed uniform purity.

Long needle crystals.

Packed in paper lined, wooden barrels.

Prices on application.

THE SELDEN COMPANY

Pittsburgh, Pa., U.S.A.

Para-Phenylenediamine

Sal Soda			
		:	1.20
Para - Toluene-Sulfonamide, 175 b bbls b Para - Toluene-Sulfonchloride, 410 b	.40	:	.41
bbls wks	.18		.30
	.10		.41
PARIS GREEN, Armenic Rasis, 500 lb kegs lb	.19	:	.20
Arsenic Basis, 500 lb kegs lb Kegs, 100 lbs lb	.21	:	.22
Paris White, see Whiting French			
PETROLATUM, green 300 fb bbls fb	.02 3	6	.03
PETROLATUM, green 300 m bbls m Dark Amber, 300 m bbls m Light Amber, 300 m bbls m Phonel are also acid carbolic	***	:	.041/2
Phenol, see also acid carbolic	18		19
Phenol, see also acid carbolic 950 b drums wks b Small drums 250-100 b b	.18		.19
Natural 240 lb des drs wks lb		:	
Phenyl-Alpha-Naphthylamine 100 lb			1.05
Phosphorus, red 110 b cs lb		:	.65
Yellow 110 m cs wks m	9.5		.32
PhosphorousOxychloride 175 fb cyl fb	.35	:	.40
Phenyl-Alpha-Naphthylamine			40
COMOS			. 2,0
Phthalic, Anhydride, 100 m bbls whas 1	.18	:	.20
Pitch, Coal-Tar wkston	24.00	:	26.00
Pitch, Coal-Tar wks ton Plaster Paris, tech 250 lb bbls bbl Platinum metal soft, 10oz lots oz l	09.00	:1	10.00
POTASH SALTS, rough			
Pot. Muriate basis 80% bgs ton Pot. Sulfate, basis 90% bgs ton		:	47.30
Pot. & Mag. Sulfate basis 48%			0 11 00
bagston		:	27.00 18.75
Manure Salts basis 20% bulk ton		:	12.40
Kainit, basis, 12.4% bulk .ton	***	:	9.00
Pot. & Mag. Sulfate basis 48% basis		•	0.00
Bulk in bags \$2.00 extr Prices cif. Atlantic&Gulf P			
kegs	.29	:	.30
Bicarbonate USP 320 lb bols. lb	.083	4:	.08 %
Powd., 725 csks wks ID	.12	:	.121/2
Import, 112 b bbls b	.18	:	.19
POTASSIUM Acetate, USP, 1001b kegs			.30
nnessen Trom amost gran 100 m			
bbls	.38	:	.41
800 fb cks fb	.05	%: %:	.051/2
90-95 calc. casks D	.063	4:	.06 1/2
96-98% calc, casks ID	.063	4:	.07 1/4
USP 100 lb kegs	.11	:	.111/2
CARBONATE, 80-85% calc. 800 b cks b 80-85% hydrated cks b 90-95 calc. casks b 99-85% ealc. casks b 99% calc casks b 10 USP 100 b kegs b 99% CP, easks b Chlorate cryst powd 112 b kegs	* * *		.121/2
wks	.081		
wiss	.083	4:	.081/2
Chloride, crys., bbls	.05	78	.001/2
	.27	:	.28
Citrate, USP, 50 lb	.55	:	.571/2
Metablsulfite, 300 b bbls b	.113	6:	.12
Oxalate, neutral, 225 lb bbls lb Perchlorate 112 lb kegs lb	.16	:	.17
PERMANGAN, USP, crys., 500 lb			
	131	4:	.14 1/4
Prossists red 112 Th kees . Th	.371	4:	.38
Prussiate, yellow 500 fb casks fb	.18	:	.181/2
Prussiate, yellow 500 lb casks lb Tartrate, neutral 100 lb kegs . lb Titanium Oxalate, 200 lb bbls lb		:	.25
Pyridine, 50 gal drs gal QUICKSILVER, see Mercury	2.25	:	2.30
Quinone, 100 lb kegs	1.75	:	2.25
R SALT, 250 bbls wks To Red Lead, See Lead Oxide	.45		.46
Rochelle Salt, USP, 225 h bbls h	.20		.2014
Imp., USP, 300 m bbls m	.19		.191/2
Sal Ammoniac, see Ammon. Chloride Sal Soda, see Sodium Carbonate			

Chemicals

quoted at \$2.25 gal. and it is thought that \$2.00 gal. would be acceptable. Consumers are receiving German material that was bought at \$2.25 gal. Latest reports are that plenty of aldehol will be available on April

1, and after that date pyridine will be entirely neglected.

Soda Ash—Market is sharply competitive in some directions. Less carlot sales are being made in some sections of the country at very slight advances over carlots. U. S. Government and Municipal business has been taken by factors at prices sharply below schedule.

Soda Caustic—In much the same position as soda ash. Schedule prices are unchanged, but shading is occurring in very many instances on carlot and less carlot business.

Sodium Nitrate—Since the advance on Feb. 1 to \$2.64 100 lbs. on spot there have been no developments. Inquiry is still routine and sales below those of former years.

Sodium Phosphate—Prices are steady and unchanged. Imported di-salt is still causing some competition to makers, but only in a few cases have makers been forced to meet importers' prices. Tri-sodium is moving in increasing volume and prices are firm. Alkali makers, however, are pushing soda ash in place of tri-sodium in some cases.

Sodium Prussiate—Makers are firm at recent advance to 12c@12½c fb, and imported material is practically unobtainable on spot and shipment is quoted above domestic prices.

Sodium Sulfide—Makers report steady movement at fairly firm prices. Importers still offer some competition.

Solvent Naphtha—Tone of the market is weak due to increased production caused by the heavy demand for toluene.

Toluene—In very heavy demand and supplies are scarce. Prices are firm and unchanged.

Vermilion—On the strong position of mercury, both English and domestic vermilion are firm at unchanged levels, although the demand is not very large.

Xylene—This product is in greatly increased production due to the heavy demand for toluene. Prices are far from steady.

Zinc Chloride—A large smelting concern has caused serious loss of business to other makers by obtaining considerable carlot business from wood preservers.

Salt Common Sodium Oxalate

Salt, Common, see Sodium Chloride			
Salt Cake 94-96% c-1 wkston White 87% wkston	15.00	:	20.00
SALTPETRE, Double refined	15.00	•	11.00
Cronulas AKO KOOM ALL M	061	4.	081/
c-l wks			.06
Powdered, bbls c-l wks Ib			.0714
Large Crystals, bbls c-l wks fb		:	.08
Triple Refined Gran bbls wks Ib	.069		.06%
SILICA	• • •	•	.011/2
Crude, bulk, mineston	6.00		7.00
Befined, floated bagston	15.00	:	30.00
Air floated bagston	32.00	:	50.00
Refined, floated bagston Air floated bagston Extra, floated, bagston	55.00		65.00
SILVER, metal American ozoz		:	.59 1/2
SODA ASH, 58% light bags delivered NY 1007b	2.04		2.19
hhla delyd NV 100 h	9 20		2.44
Contract, c-l.bgs,wks, 100 fb			1.321/2
Contract, c-1,bgs,wks. 100 fb 58% dense c-1 bgs.wks.100 fb Spot 5c 100lbs differential		0	1.321/2
Spot 5c 100lbs differential			
CAUSTIC, 76% solid drums delv'd, NY 100 D Ground & Flake 76%	3.66	8 0	3.81
Ground & Flake 76%	0.00	٠	
drums del., NY100 D	4.08	:	4.21
bbls del100 lb	4.31	:	4.46
Contract e-l wks100 b			3.00
Ground de Flake 10 % Ground del, NY . 100 m			3.10
Ground & Fiake, 76%, Spot, was e-1100 ID USP, stick, 10 ID cans ID Pure, stick, by alcohol ID Soda Sal. see Sodium Carbonate		:	3.50
USP, stick, 10 m cans m	.19	:	.21
Pure, stick, by alcohol To	.25		.27
Soda Sal. see Sodium Carbonate			
Southern Metal, 12% ID LINES ID		:	.27
SODIUM ACETATE, crys 450 lb bbls wks		4.	.05
Aluminate 500 hble wks . Th	071	2:	.08
Aluminate, 500 lb bbls wks lb Aluminum Sulfate, see Alum Soda	,		100
Aluminum Suitate, see Alum Soda Arsenate, 47b mtl. wks drms gal Drums, 87b material wks gal Bicarbonate 400 fb bblsNY100 fb Rbls c-l wks100 fb 112 fb kegs c-l wks fb 112 fb kegs c-l wks fb	.50	:	.60
Drums, 8 lb material wks gal	1.00	:	1.20
Bicarbonate 400 b bblsNY100 b			2.41
Bbls c-1 wks100 m		:	3.00
11210 kegs c-1 wks10			9.95
	.063	4:	.06%
Bisulfite, dry powder 500 lb	,	*	
Bisulfite, dry powder 500 b		*	.081/2
Imported		:	.08
BROMIDE, USP, 100 h csh	.48		
Imp. USP., 220 b cases b Carbonate 350 b bbls NY 100 b	1.90	5:	45
Works e-1 100 fb	1.10		1.30
Imp. USP., 220 fb cases fb Carbonate 350 fb bbls NY 100 fb Works e-1100 fb Monohydrate, 400 fb bbl 100 fb Pure photographic 100 fb		:	2.40
Pure photographic 100 lb			
Imported, 112 lb kegs lb	.061	4:	.061/2
Chloride, techton CP, 300 lb bblslb	12.00	:	13.00
Chlorate 112 h kers wks h	061		
kegs	.06		.08
Chromate, 800 m bbl m		:	.08
Cyanide 96-98% 100 & 250 D			
			.20
e-1 wks	.18	:	.19
Fluoride, 300 b bbls wks b	.083	4 .	.09
I Imp 700 Th eles Th	.09		.10
Hydroxide, see Soda Caustic			
Hypochlorite Soln 100 m cbys m			.05
Hydrosulfite 200 D bble fobre D	.22		
Hydrosulfite200 m bbls follows mb HYPOSULFITE, tech., pea crys 375 m bbls., wks 100 m	.22	0	.24
375 m bbls., wks 100 m	2.65		3.05
Bbls., c-1 wks 100 fb			2.50
100 lb kegs wks 100 lb	2.80		2.90
Imp	2.75	:	
Bbls., c-l wks100 fb	2.40		2.65
Kegs, wks100 fb	2.35		2.45
Kegs, wks100 b	2.35		2.45
Meetanilate, 150 lb bbls . lb Molybdate, 100 lb kegs . lb	.70		.75
Nanhthianata 200 b kegs b			1.10
Nitrate crude 95% 200 h	.55		.57
e-l NY			2.64
c-l NY 100 To		9	2.65
Double Refined 400 lb bbls			
Gran c-1 wks			.03 %
Gran e-l whs		:	.03 %
Gran c-1 whs	.08	: 4: 14:	.03 % .09 .09
Gran c-1 whs	.08	4:	.09
Gran c-1 whs	.08	4:	.09



No matter what price is paid, there can only be one best!

And SOLVAY is sold at one fair price to all!

Solvay Sodium Nitrite

Solvay 58% Soda Ash

Dense-Light

Solvay Fluf (Extra Light Soda Ash)

Solvay 76% Caustic Soda

Solid-Flake-Ground

Solvay Super Alkali

Solvay Snowflake Crystals

(Trademark Registered)

Solvay Laundry Soda

Solvay Cleansing Soda

Solvay Tanners Alkali

Solvay Tanners Soda

Solvay Liquid Caustic Soda

Solvay Calcium Chloride 73%-75%



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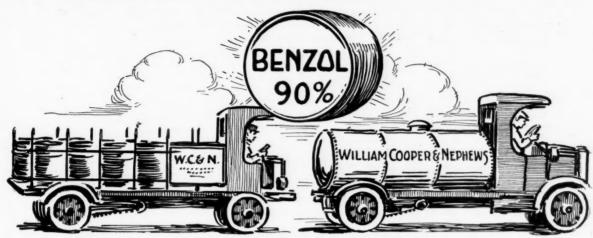
Kansas City

St. Louis

::::::::

Sodium Perborate Tin Tetrachloride		Chemicals	Titaniv	om Oxide Degras
SUDIUM (Continued)		1	Titanium Oxide, bbls wks D	.13 : .14
Perborate, 275 lb bbls lb	.21 : .22	OILS AND FATS	Tolidine, 350 lb bbls	.90 : .94
Peroxide, 200 lb cases lb Phosphate, di-sodium tech 550 lb	.231/4: .24	Castor Oil—Makers continue to	Toluene, 8,000gal tnk cars wks gal 110gal drs wksgal	: .35
Bbls100 b	3.25 : 3.55	quote unchanged prices on all grades	Toluidine, Mixed, 900 lb drs wks lb	.31 : .32
Imp100 lb	: 3.25	and the market is firm with stocks	Toner Lithol Red bbls	.85 : .90
Mono-sodium 100 lb kegs lb	.30 : .31	moving to consumers hands in good	Para Red bbla	.75 : .80
Tri-sodium tech c-1 bbls 100 lb Picramate, 100 lb kegs lb	: 3.90	volume.	Triacetin, 50gal drs wksgal	1.75 : 1.80 3.60 : 3.90
Para-Toluene Sulfonate 175 fb		Chinamad Oil Is seein	Tribromphenol, 100 lb cases lb	: 1.10
bbls	.08 : .09	Chinawood Oil—Is again out-	Triphenylguanidine	.69 : .73
PRUSSIATE, yellow 350 m bbls		standing this week for its upward	Triphenyl Phosphate, 450 b bbls b Tungsten, NY WOunit	11.75 : 13.00
wks	.12 : .121/		Ultramarine Blue	.15 : .25
Imp., 50 lb cks	.10%: .11	for spot oil in barrels and sales are	Urea Pure, 112 lb cases lb	.18 : .20
Salicylate, 100 lb kegs lb	.37 : .38	being made at 18c fb. Tanks on	Venetian Red	: .60
Silicate, 40° turbid, tanks		the Coast have also advanced rather	English kegs	1.55 : 1.60
wis	.85 : 1.10	sharply and are named at 16c@	WHITE LEAD, see lead, white	
55gal drums wks100 lb 40° clear, tanks wks100 lb	: 1.10	161/4c lb for February delivery;		
55gal. drs wks100 lb	1.20 : 1.45	15%c to for March and 15c to for	XYLENE, 3° 8,000 gal. tanks wks	: .55
42° turbid tks., wks100 lb	: .80	April. The situation in China tends	5° tanks wksgal	
55gal drs wks100 lb 42° clear, tanks wks 100 lb	.90 : 1.15	toward at least a maintenance of	10° tanks wksgal	
55gal drs., wks100 fb	1.35 : 1.75	this market for the present. Con-	Com'l tanks wksgal Drum lots 5c gal higher	: .36
Silicofluoride, 450 m bbls NY m	.041/4: .05	sumers are cautious about buying	Xylidine crude	: .35
Stannate, 100 m drums m Sulfanilate 400 m bbls m	.481/4: .49	ahead and little actual business is	Refined	.38 : .40
Sulphate, see (Hauber's Salt		passing for the forward positions.	ZINC METAL, high grade slabs	
Sulfate, Aphydrous 550 lb bbls	and to	01 D	e-1 NY100 lb	: 6.92 1/2
e-l wks	.0234: .023	same level on the Coast for both	Ammonium Chloride, powd 400 lb	: .061/4
Imp., 250 m bbls m Sulfide, 60% solid, 650 m drs	.01 7803		Carb., tech., bbls NY D	.091/2: .10
le-1 wks	.031/4: .04	Manila and Ceylon in tanks. Fac-	USP, 100 lb kegs	: .20
Drs., e-l wks	: .033		Chloride, fused 600 lb drs wks lb Drs., e-l wks lb	: .06
Imp., 700 lb drs NY lb 60% brkn. 650 lb drs wks lb	.03 : .033	of open an advance of	Granulated, 500 m bbls wks m	.061/4: .061/4
Drs., c-l wks	: .035		Imported, dr NY ID	.0614: .06%
30% crys 440 lb bbls wks lb	.021/2: .025		Solution 50% taks wks 100 b	: 3.00
Imp., 400 m bbls m	.0214: .023		Cyanide, 100 lb drs lb Dust, 100 lb tins wks lb	.40 : .41
Sulfite, cryst 400 lb bbls wiss lb Anhydrous USP, 100 lb kgs lb	.0834: .09	and particularly cottonseed, crude	500 lb bbls kegs c-1 wks lb	: .09
Sulfocarbolate USP 100 m km m	.32 : .84	corn at the mills is quoted fraction-	Oxide, Amer., bags wks I	
Sulfocyanide, 400 m bbls m	.40 : .45	alle higher at 78/ a@ 90 th Dofmad	Amer., 300 lb bbls wks lb French, 300 lb bbls wks lb	.07%: .07%
Tungstate, cryst., 100 lb kegs lb	.80 ; .823	is unchanged and quiet.	Bbl e-l wks	.10%: .12%
SOLVENT NAPHTHA, 110gal drs	: .40		Bags e-l wks	
8,000gal tank cars was gal		Cottonseed Oil-In the face of	10-25 bbl lote 10-	: .14
STRONTIUM, Bromide, USP, 50 h		predictions that refined oil is due	5bbl lots	: .16
kegs	.51 : .52	for a setback, the local market con-		: .17
Carbonate, 600 lb bbls wks lb	.07%: .07	The state of the s	Green seal bhis W	.11%: .13%
Nitrate, 600 b bbls NY b	.08 : .083	is quoted this week at 9c lb. Febru-	Red seal bbls	
SULFUR Crude, fob mineston	18.00 : 19.00	ary delivery is named at 9c lb also;	Stearate, USP, 50 m bblsm	.20 :21
Brimstone Broken Rock 250 fb bgs		March at 9.30c lb and April at 9.35c	Rbis e-1 wire	.03 : .03 1/4
e-l	2.35 : 2.55	lb. Sales on Monday were 28,-	USP, 100 m bbls	.08 : .09
Roll, 150 m bgs c-1 NY 100 m	: 2.25	800 bbls., well above the average		.30 : .32
Less e-1 bbls NY100 m	2.65 : 2.85	for some time past. Crude is also	Sulfocarbolate, 100 lb kegs lb	.29 : .30
Flour, Heavy bgs c-1 100 h		firm and higher at 8c to in the Val-	01-05	
Light, 100% bags c-1 100 B Rubbermakers 100% 240 B	: 2.60	ley and Southeast. Texas crude is	Oils @ Fa	Ats
bbls, e-l bags NY 100 lb	: 2.60	offered at 7% c fb.	Castor, No. 1, 400 h bblsh	.14 : .141/2
Comm'l 99% e-l 150 m bgs		Greases-Factors here quote un-	80 lb cases	.15 : .151/2
NY	: 1.45	changed prices and the market is		.131/4: .14
bags NY100 m	: 2.40	holding steady with the average	China Wood bbls spot NY To	.18 : .1814
Flowers 100% 155 b bbls		business passing.	Tanks, Spot NY Th	· · · · nom.
NY e-1	: 3.45		Coconut Ceylon 375 m bbls NY m	.15 : .16
Lac., 125 lb bbls NYlb	: ,12	Lard Oil-An advance in the spot	8,000 gal tanks NY fb	.08%: .081/4
Sulfur Chloride, red, 700 lb drs		price of No. 1 extra was the only	Cochin, 375 lb bbls NY ll	.10 : 10 %
wke			Manila bbls NY III	.091/2: .091/4
Yellow, 700 fb drs wks In			Tanks NY II	.081/2: .083/4
Sulfur Dioxide, 100 m cyl m		of this grade are being made at	Tanks Pacific Coast ID	.08%: .081/2
Sulfuryl Chloride, 600 lb drs lb		11% c tb.	Edible bols N1	
Tar Coke Oven, Tks., wksgal Water Gas, Tks., wksgal			Cod Newfoundland, 50gal bbls gaing Tanks, NYgain	
Terra Alba No 1 300 m bbls 100 m		Linseed Oil—Crushers have not	Cod Liver, see Cod Liver Oil under	Chemicals
Tetralene, 50gal drs wks Ib	: ,20	changed their price this week and	Copra, bags	.06 : .061/4
Thiocarbanilid, 170 m bbls m		continue to quote 10.8c lb in bar-	Tanke 9.	
TIN, metal Straits, NY			Crude tanks mills	.07%: .08
99% American NY ID Bichloride, 50% sol'n. 100 B	: .69	However the undertone is not as	Bbls NY	.09%: .10
bbls wks I			PSY 100 bblg grot	
Crystals, 500 lb bbls wkslb	: .46	lower bid would undoubtedly be ac-	MarApril R	.09%: .091/2
Oxide, 300 lb bbls wkslb	:70	cepted, for buying interest has	White, 100 bbls lots NY In	: .131/2
100 lb kegs wks lb	: .72	slackened off again. The seed mar-	Degras, Amer., 50gal bbls NY	
Recovered bbls In Tetrachloride, 100 lb drs wks. In		kets are unchanged.	Brown, bbls NY ID	

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WILLIAM COOPER & NEPHEWS

Incorporated

152 W. Huron St.

Chicago, Ill.

Glue

Albumen, Egg Edible

Degras

Turkey Red Oil		
Neutral, bbls NY	nom.	.04 .12 .50 .10 % .06 % .06 % .06 % nom.
LARD 01L, edible prime. D 0ff prime bbls. D Extra bbls. D Extra, No. 1 bbls. D No. 1 bbls. D No. 2 bbls. D	:	.13% .11% .10%
LINSEED, raw c-1 bbls spot D Five bbls raw D Tanis, raw D Bld., 5bbl lot wks D bbl boiled 5 bbl D MarMay c-1 wks D		10.8 11.1 10.2 11.4 11.5 10.8
Menhaden, crude tanks Balt .gal Light pressed, bbls NY .gal Yellow bleached bbls NY .gal Extra bleached bbls NY .gal Blown bbls NY .gal	.65 .68 .70	.471/2 .67 .70 .72 .10
Mineral Oil, white, 50gal bble gal Russian gal	.95	.90 1.00 .16¼ .12¾ .16¼ .10¾ .10¼ .11¼ .09¼
Column C	1.55 09%: .09%: .08%: .08%:	1.60 2.00 .10 .09% .09 .081/4
Niger casks D	.09 1/4: .08 : .15 1/4: .10 : .12 : .13 :	.16 .10¼ .12¼ .13¼
Tanks, Coast Ib Poppyseed, bbls NY gal Rapeseed bbls NY Japanese gal English gal gal Blown bbls NY gal Red 0il distilled bbls b	.10¼: 1.70 : .80 : .87 : 1.00 : .10 :	.85 .89 1.02 .101/2
Tanks	.103/2: .50 .113/4: .14	.11 .09 nom. .47 .12 .15
SOYA BEAN, crude tks Pac Cst. Ib Crude, tks NY	.09 1/2: .10 1/4: .12: .85:	.09% .10½ .12% .13 .80
STEARIC ACID, Double pressed, bags dist	.13 1/4: .13 1/4: .15 1/4:	.13 % .13 % .13 .15½ .15 .09¾ .10
Tallow 0il, acidless the NY Bbls c-l NY B Whale, nat winter bbls NY gal Bichd, winter bbls NY gal Extra blchd bbls NY gal Yolk 0il, bbls b Turkey Red, 0il, single bbls b	.08½: .76: .78: .80:	.0834 .10 .78 .80 .82

Oils & Fats

Neatsfoot Oil—All the higher grades are unchanged as to price this week and rather quiet. Factors here have advanced the price on No. 1 to 10½c fb. Demand is routine.

Oleo Oil—No. 1 oil advanced ½c to over the week end and dealers are selling in rather a routine way at 11½c tb. No. 3 oil is again easier and quoted at 8½c tb at which level there is some interest. No. 2 is unchanged at 9½c tb.

Olive Oil—The New York market is now on the basis of how much denatured oil is available rather than what price must be paid for it. Limited sales are being made at \$1.55@\$1.60 gal. on spot., with little relief from replacements expected for some time. Foots are in much the same position with none available on spot and 9%c@10c tb asked for nearby and 9%c tb for February shipment from Spain.

Palm Oil—Consumers are showing better interest and spot prices on both Lagos and Niger are higher this week. Lagos is offered at 8%c @9c the and sales of Niger have been made recently at 8c@8½c th.

Rapeseed Oil—Japanese oil has again been advanced on spot due to higher replacements and importers are now asking 80c@85c gal. as to seller. English oil is likewise higher at 87c@88c gal. which price represents a sharp advance over last week. Blown oil is quiet at \$1.00@\$1.02 gal.

Soya Bean Oil—Since the advance last week on the Coast the market in all quarters has shown no change and the demand is routine at the moment.

Stearine Oleo—Fractionally lower this week at 9½c tb. The market is steady at this level on a fair inquiry.

INDUSTRIAL RAW MATERIALS

Albumen—Edible egg on spot is in a firmer position at 85c@88c tb as to seller. Supplies are in smaller volume and consuming interest is up to the average. Political troubles in China are holding the replacement values practically on a par with this market. Sales of blood and vegetable albumens are at unchanged prices.

Blood—The New York market has been supplying parcels to the midwest for feeding purposes at \$4.50
unit and this market is now practically bare of stocks. Chicago is

Industrial Raw Materials

Raw Materi	als		
Albumen, egg edible			.88
Albumen, egg edible	.80		.83
Blood, 225 lb; bbls lb Vegetable edible lb	.45	:	.55
Technical	.60	:	.55
	.41		
Annatto, fine	.13	:	.48
Triple, 600 m bbls	.16	:	.17
Cone, 600 m bbls		:	
Asbestine c-l wkston		:	14.75
le-l wkston	.58	:	.60
Sees Wax, white cases	.46	:	.48
Crude, bags Ib	.40	:	.41
Commercial Cs,			
Blood dried fob NYunit Chicagounit		:	5.00
S Am Shipmentunit		:	4.00
Bone Raw, Chicago	29.50	:	30.00
Bone Meal, 3 & 50 impton	28.50	:	29.00
Bone Ash, 100 lb kegs	.00	:	.081/4
Candalilla Way bass D	.33	:	.35
Candelilla Wax, bags ID Carnauba Wax, Flor., bags ID Powd ID	.50		nom.
Powd	.50	:	nom.
No. 2. regular bass	.60	:	.62
No. 2, N. Country bags Ib		:	nom.
Powd No. 1, Yellow, bags	.35	:	.40
	,00	•	
CHARCOAL Hardwood lump, bulk wksbu	.18	:	.19
Hardwood, lump, bulk wksbu Wood, powd., 100 b bbls b Willow, powd 100 b wks bbls ib	.04		.05
Willow, powd 100 h wks bbls h	.06	:	.061/4
Chestnut clarified 25% tks wks fb Bbls., wks	.015	<u>.</u>	.01%
Powd. 60% 100 b bags wks b	.051	4:	.05%
Decolorized bags with To	.06%	5:	.07
Cudbear, English	.17	:	.18
Cutch Rangoon 100 m bales m	.13	:	.15
Borneo solid, 100 lb bales lb	.05%	:	.05%
Cyanamide, bulk, e-l wks Amm unit	1.827	4:	1.90
ImpAmm. unit Dextrin, white corn 140 m bags e-1100 m	1.80		
e-1100 m			
		:	3.87
bags e-l100 fb	• • •	:	3.87
bags e-l100 fb Canary	•••		3,87 3,97 3,92 4,02
bags c-l100 lb Canary	•••	: : : : :	3.87 3.97 3.92 4.02 .081/5
bags e-1			3.87 3.97 3.92 4.02 .081/2
bags e-1	.08		3.87 3.97 3.92 4.02 .081/2 .081/4
bags e-1	.08		3.87 3.97 3.92 4.02 .083/4 .081/4 nom. 45.00
bags e-1	.08	*********	3.87 3.97 3.92 4.02 .083/4 .083/4 nom. 45.00
bags e-1	.08		3.87 3.97 3.92 4.02 .08½ .08½ .08¾ nom. 45.00
bags e-1	.08	************	3.87 3.97 3.92 4.02 .083/4 .083/4 nom. 45.00
bags c-1	.08 .04 44.00	:::	.80 .14 .14¾
bags e-1	.08 .04 44.00 .78 .13% .14	:::	.80 .14 .14¾ .10
bags e-1		&	.80 .14 .14 1/4 .10
bags e-1	.08 .04 44.00 .78 .13% .14	:::	.80 .14 .14¾ .10
bags e-1		* : :	.80 .14 .1434 .10 nom.
Dags e-1 100 m		& : : :	.80 .14 .14 34 .10 nom. .95 .90 .04
bags e-1			.80 .14 .14 34 .10 nom. .95 .90 .04
bags e-1			.80 .14 .14 % .10 nom. .95 .90 .04 .23 .22 .10
bags e-1			.80 .14 .14 34 .10 nom. .95 .90 .04
bags e-1 100 fb Canary 100 fb Canary 100 fb bags 1e-1 100 fb Potato, white 220 fb bags 1e-1 fb Yellow, 220 fb bags 1e-1 fb Yellow, 220 fb bags 1e-1 fb Taploca, 200 fb bags 1e-1 fb Pods, bags ship 100 Pods, bags ship 100 EARTH Diatomaceous see Kieselguhr Egg Yolk, 200 fb cs fb Ester Gums Dark, 280 fb bbls fb Light, 280 fb bbls fb Light, 280 fb bbls m Fish Scrap, dried wks unit Acid Bulk 7 & 3½ Deliv Norfolk & Balt basis unit Flavine Lemon 55 fb cs Nfb Orange 70 fb cs Nfb Orange 70 fb cs fb Fustic, solid 50 fb boxes fb Liquid, 51° 600 fb bbls fb Fustic, sticks ton Chips fb Gall extract fb Gall extract fb Togoga for the contract of the cont		****	.80 .14 .14¼ .10 nom. .95 .90 .04 .23 .22 .10
bags e-1 100 m Canary 100 m Dags 1e-1 100 m Potato, white 220 m bags 1e-1 m Taploca, 200 m bags 1e-1 m Texter Gums Dark, 280 m bbls m Light, 280 m bbls m Tish Scrap, dried wks unit Acid Bulk 7 & 33/2 Deliv Norfolk & Balt basis unit Flavine Lemon 55 m cs Nm Orange 70 m cs Nm Orange 70 m cs Nm Trustic, solid 50 m boxes m Liquid, 51° 600 m bbls m Fustic, sticks ton Chips m Gambier 25 % Hq. 450 m bbls m Common 200 m cases			.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .22 .20 .05 .21
bags e-1		***************************************	.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .22 .10 32.00 .05 .21 .14
Dags Canary 100 m		***************************************	.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .22 .10 32.00 .05 .21 .14 .09 .23
bags e-1		***************************************	.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .22 .10 32.00 .05 .21 .14 .09 .23 .50
Dags e-1 100 m			.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .22 .10 32.00 .05 .21 .14 .09 .23 .50
bags e-1		***************************************	.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .10 32.00 .05 .21 .14 .09 .23 .50
bags e-1 100 m Canary 100 m Dags 1e-1 100 m Potato, white 220 m bags 1e-1 m Taploca, 200 m bags 1e-1 m Texter Gums Dark, 280 m bbls m Light, 280 m bbls m Texter Gums Dark, 280 m bbls m Fish Scrap, dried wks unit Acid Bulk 7 & 3 ½ Delty Norfolk & Balt basis unit Flavine Lemon 55 m cs N m Orange 70 m cs m Fossil Flour m Fustic, solid 50 m boxes m Liquid, 51° 600 m bbls m Crystals, 100 m boxes m Liquid, 51° 600 m bbls m Gambier 25 % Hq. 450 m bbls m Gambier 25 % Hq. 450 m bbls m Common 200 m cases m Gambier 25 % Hq. 450 m bbls m Gambier 25 % Hq. 450 m bbls m Common 200 m cases m Glucose (Grape Sugar) dry 70° Bags e-1 NY 100 m S0° bags e-1 NY 100 m Tanners' Spel 100 m bgs 100 m GLUE, murs white bbls			.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .22 .10 32.00 .05 .21 .14 .09 .23 .50
bags e-1			.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .22 .10 32.00 .05 .21 .14 .09 .23 .50 .324 3.34 3.14 .26 .24
bags e-1			.80 .14 .14¼ .10 nom. .95 .90 .04 .23 .22 .10 .05 .21 .14 .09 .23 .50 .50 .324 .334 .314 .26 .24 .25
bags e-1 100 m Canary 100 m Dags 1e-1 100 m Potato, white 220 m bags 1e-1 m Taploca, 200 m bags 1e-1 m Texter Gums Dark, 280 m bbls m Light, 280 m bbls m Fish Scrap, dried wks unit Acid Bulk 7 & 3½ Deliv Norfolk & Balt basis unit Flavine Lemon 55 m cs Nm Orange 70 m cs m Fossil Flour m Crystals, 100 m boxes m Chips ton Gambier 25% 1iq. 450 m bbls m Gambier 25% 1iq. 450 m bbls m Common 200 m cases m Singapore cubes, 150 m bags m Gelatin Technical 100 m cs m Glucose (Grape Sugar) dry 700 bags e-1 NY 100 m S0 bags e-1 NY 100 m Tanners Spci 100 m bgs 100 m Glue, pure white bbls m French bbls m French bbls m French bbls m French bbls m Freish bbls m Frish bbls m			.80 .14 .14 ¼ .10 nom. .95 .90 .04 .23 .22 .10 32.00 .05 .21 .14 .09 .23 .50 3.24 3.14 .26 .21 .23 .50
bags e-1 100 m Canary 100 m Dags 1e-1 100 m Potato, white 220 m bags 1e-1 m Taploca, 200 m bags 1e-1 m Texter Gums Dark, 280 m bbls m Light, 280 m bbls m Fish Scrap, dried wks unit Acid Bulk 7 & 3½ Deliv Norfolk & Balt basis unit Flavine Lemon 55 m cs Nm Orange 70 m cs m Fossil Flour m Crystals, 100 m boxes m Chips ton Gambier 25% 1iq. 450 m bbls m Gambier 25% 1iq. 450 m bbls m Common 200 m cases m Singapore cubes, 150 m bags m Gelatin Technical 100 m cs m Glucose (Grape Sugar) dry 700 bags e-1 NY 100 m S0 bags e-1 NY 100 m Tanners Spci 100 m bgs 100 m Glue, pure white bbls m French bbls m French bbls m French bbls m French bbls m Freish bbls m Frish bbls m			.80 .14 .14¼ .10 nom. .95 .90 .04 .23 .22 .10 .05 .21 .14 .09 .23 .50 .50 .324 .314 .26 .24 .25 .40 .21 .21 .25 .21 .21 .21 .21 .22 .22 .22 .22 .22 .22
bags e-1			.80 .14 .14¼ .10 nom. .95 .90 .04 .23 .22 .10 .05 .21 .14 .09 .23 .50 .50 .324 .314 .26 .24 .25 .40 .175

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CHE

Gums Oak Bark Industrial Raw Materials

Osage Orange Whiting

07 . 0734

Oak Bark		
GUM, Accroides, Red, coarse and fine, 140-150 b bags b Accroides, Yel. 150-200 b bgs b		041/4
fine, 140-150 b bags	.033/4:	.06 1/2
Powdered, 150 ID Dgs ID	.18 :	.20
Animi (Zanzibar) Bean and pea		
250 lb cases	.40 :	.45
Glassy, 250 fb cases fb	.60 :	.65
Asphaltum, Barbadoes, Manjak 260 lb bags	.09 :	.12
Egyptian, 200 fb cases fb	.15 :	.17
Gilsonite selects 150 m bgs ton	55.00 : 6	30.00
Egyptian, 200 m cases m Gilsonite selects 150 m bgs ton Benzoin, Sumatra, Tech., 120 m	20 .	20
cases	.30 ;	.32
Water White, ID	.35 :	.36
Lagnt Amber,	.1272.	.14
Dark Amber,	.08%:	.09
Clean Opaque	.12 .	.10
180 fb bags-		
Pale, E. I. Bold	.17 :	.171/2
1807b bags-	.07 1/2:	.08
180 lb bags— Copal, Manila, 180-190 lb		1
Baskets—		
Pale Bold, Loba A, To Pale Bold, Nubs, Loba B . To	.16 : .15 :	.161/2
Pale, Rold Lobs C %	.14 1/2 :	.151/2
Pale Nubs. P. N. m.	.14 :	.141/2
Pale Bold, 224 lb cases lb Copal, Pontianak, 24 lb cases—	.14 :	.18
		2011
Pale, genuine split chips th	.19 :	.281/2
Pale, genuine split chips the Damar, Batavia standard 136 to cases		.10/2
Batavia E South 1997	.25%:	.26
Ratavia W Collector 130 in Ca In	.181/2:	.19
cases and bags	.12 :	.13
Batavia, Dust, 160 lb bags lb	.101/2:	.11%
Singapore No. 2 224 h cs. h	.34 :	.36
Cases and bags	.11	.111/2
Elemi, No. 1, 80-85 m csm	.14 :	.15
No. 3, 80-85 m cases m	.13 :	.14
No. 3, 80-85 m cases m Kauri No. 1, 224-226 m cs. m	.67%:	.68
No. 2, fair pale 224-226 D		
Bush Chips 224 - 226 m	.44%:	.45
cases Th	.42 :	.43
Pale Chine 224-226 Th cases Th	241/	9.6
Brown Chips 180-200 h bgs h	.141/2:	.16
Sandarac Prime quality 2 bags and 300 m casks. m	.27	.28
Graphite crude 220 m bagstor Flake, 500 m bbls m	15.00	35.00
Flake, 500 m bbls	.05	.09
HEMATINE, Paste, 500Tb bbls Tb Crystals, 400Tb bbls Hemlock, 25% 600Tb bbls wks .T Barkton	.09	.12
Hemlock 25% 600 m bble mkg m	.12	.20
Bark tor	.031/2	* 16.00
Bark tot Hypernic, 51° 600 m bbls m Indigo Madras bbls m 20% paste drums m Japan Wax 224 m m	.12	: .15
Indigo Madras bbls	1.28	: 1.30
Japan Wax 224 m cs	.14	: .15
MITTER ONLY	.23	24
KIESELGUHA, 95 To bags NY to Larch 25% 600 To bbls wks T	n 60.00	: 70.00
FOWG. 1 OFFID DAMS Wile Th	0.0	: .04
Logwood 51° 600 m bbls m	.0814	
Lower grades	.0736	: .08
Solid, 50 to boxes	.12	: .15
LOGWOOD sticksto	26.00	: 27.00
Chips 150 m bags	b	: .30
Mangrove 550% 400 m bble m	001/	
Mangrove bark, Africanto	n 37.00	: 38.00
Mangrove bark, African to Marble Flour, bulk tr	on 10.00	: 12.00
		micals
Montan Wax, crude bags	b .24	. 97
Myrobalans 25% Hould bbls	D .04	: .047/
50% solid, 50th hoves	h 00	: .08%
Myrobalans, bags J1 to	n 43.00	: 44.00
32	on 21 00	. 20 00
Nitrogenous Material bulk un	111	: 3.60
MUTCALLE Chilman b.		
Alenny bags	m .25	: nom.
Alteny bags Powd. bags Oak bark, whole Ground Oak tanks who	n .22	: .24
Ground	on 45 00	50.00
Oak, tanks wks 23-25% liq. 600 h bbls wks Solid, powd	m	033
23-25% Ho. 600 h bble wke	m 0.4	: .041
Solid, powd	m .071	

also sharply higher at \$5.00 unit and scarce. With little material available in any direction, present prices are probable for some time.

Bone Meal—Imported presents a firmer tone this week and some business has been done at \$28.50 ton for 3 and 50 per cent material. Domestic is steady at about \$1.00 ton higher than imported.

Carnauba Wax—The spot position is a shade easier at 65c@67c tb for No. 1 yellow and 59c@62c tb for No. 2 regular. Stocks are still scarce on spot, but arrivals are expected to ease the market here somewhat. No. 3 North Country is lower this week at 35c@36c tb.

Egg Yolk—Practically nominal on this market with very small sales at 77c@80c th as to seller. Factors on this market do not look for any immediate relief, in fact, the situation in China has served to make the position more acute.

Gums Varnish—Sandarac continues higher on spot on the strength of advanced costs at the primary market. Otherwise the market is quiet as to price changes, with a fair volume of business reported.

Japan Wax—Spot sales have been made this week at 23c@24c fb. The expected decline to levels of last year may be halted by the Chinese situation which has firmed the replacement market for the moment at least.

Rosin—Common and medium grades show advances this week. The demand has not been particularly steady and prices have moved up and down with the inquiry. Current quotations are: B, \$12.10; D, \$12.40; E, \$12.55; F, \$12.60; G, \$12.75; H, \$13.30; I, \$13.35; K, \$14.55; M, \$14.85; N, \$15.85; WG, \$16.60 and WW, \$18.55.

Starches—As with dextrins are moving well with producers taking orders at the scheduled figures.

Tankage—New York is named higher this week at \$4.25 and 10 unit on the excellent demand for feeding purposes from the West. Chicago is firm and scarce and South American is offered at \$4.00 and 10c unit for April arrival, which is too late for this season.

Turpentine—Quiet on spot early this week with prices for the week lc gal. lower at 78c gal. Receipts at the primary markets continue small, but consumers are buying only as needed which serves to keep the market down.

1 0	Osage Orange 51° liquid D0° Powd, 100 lb bags D1. Creatals D1	7 : .07% 4%: .15
1	Crystals D1	6 : .17
F	Crystals	3 : .15
P	Paraffin, ref'd. 200 lb. cs states 118-120 deg. M.P lb0	8 : .09
	123-127 deg. M.P b0	614: .06% 114: .07%
	128-132 deg. M.P ID0	8 : .081/2
1	138-140 deg. M.P b	834: .10 234: .65
1	Phosphate Acid, 16% Bulk was unit	275: .03
1	Florida Pebble 68%ten. 3.0	0 : 8.25
	Florida Pebble 70%ton 3.5	00 ; 3.65 85 : 4.00
	Florida Pebble, basis 75%-74%	. : 5.35
1	Florida Pebble, 75%	. : 5.60
	Tennessee, 72%ton.	. : 5.50
-	Pine Oil, stm., dist. bblsgal	. 1 .66
	Primebbl. 8.	00 : 10.60
	Plaster Paris, tech., 250 m bbls bbl	. : 3,30
	Lump, bags D.	04 : .05
	Phosphate Acid, 16% Bulk wis unit Phosphate Rock, fob., mines Florida Pebble 68% ton. Florida Pebble 70% ton Florida Pebble 72% ton Florida Pebble, 75% Florida Pebble, 75% Florida Pebble, 75% Florida Pebble, 75% Florida Pebble, 55% Florida Pebble	.03
	QUEBRACHO, 35% liquid the Ib.	08 : .08%
1	35% bleaching, 450 m bbls m.	04 : .05
s	Solid 63% 100 D. bales cif. D.	.04%
-	Clarified, 64% bales ID.	0614 .07
-	Solid, 100 lb . boxes	10 : .13
9	Quercitron, bark, roughton	00 : 35.00
	Powdered, \$50 m bbls m. QUEBRACHO, \$35% liquid tha m 450 m bbls e-l	net)
1	B,12.10 I,	14.55
	E,12.55 M,	14.95
	F,12.60 N,	16.90
1	н,13.30 ww,	16.60
s	(Soid in 600 lb bhls net, quotation anit of 280 lb)	one beaut on a
a	Rosin Oil first run 50 gal bblsgal	: .67
	Second run bblsgal	.08
	Lump selected, bbls D .	.09 : .12
n		.00 : 30.00
e	Sago Flour 150 D bags D.	.0434: .05
e	Shellac, T.N., bags	.46 : .47 .50 : .51
-	Garnet, bags	.45 : .46
it	Bone dry, bags	.55 : .56
	Bone dry, bags	: .0134
n	Powd. 50% 100 m bags wks m.	.02 : .0254
k.	Powd. 140 bgs. c-l100 lb	: 3.22
1-	Bags 1c-1	: 3.32
d	Bags Ic-110 b	: 3.22
r-	Potato domestic, 200 m bgs c-1 m.	.0614: .061/2
),	, Wheat, dom., thick bags D.	.061/4: .07
Ī,	Thin, bgs	.06 : .083/2
ζ,	Imported bags duty paid . B Wheat, dom., thick bags . B. Thin, bgs . B. Sol. Potato . B. Sumae, extract, liq 450 B bbls . B. Stainless, 600 B bbls . B. Stainless, 600 B bbls . B.	.06 : .063/2 .05 : .06 .103/4 .11 : .113/5
G,	Statuless 600 lb bbls lb.	.11 : .11%
	Sumac, Sicily leaves 100 D bags ton13	0.00 : nom.
re	Ground shipmentton 5 Virginia, 150 b bagston, 5	5.00 : 60.00
18	S TALC. Italian 220 h bags NY ton, 4	0.00 : 50.00
	Refined, white bagston, 5 French, 220 b bgs NYton, 3	0.00 : 55.00 0.00 : 35.00
ed	d Refined, white bagstom. 3	8.00 : 45.00
ii	Dom erude, 100 lb, bags NY 100, 1	2.00 : 15.00 6.00 : 18.00
d	- Tankage oround NY	4.20 6 .10
i	· I Wich grade fob Chicago unit	4.50 & .10 4.00 & .10
tŀ	mentage Flour high grade her . D	.04%: .04%
n	d Nedium grade, ogs	.031/2: .031/4
1	IS Tar, Kiln-burntbbL	
	Tar, Kiln-burot bbl. Retort bbls bbl. Tripoll, 500 m. bbls 100 m.	2.50 : 3.00
r1	V Turpentine Spirits, bblsgal	.78 : .83 .66 : .73
el		
ot	ts Beard, 42% tan bagston	58.00 : 59.00
u	Mixture Bark bagston	43.00 : 44.00
	IC Wattle Davis hom	50 00 * 51 50
EA.	Wattle Bark, bagston Extract 55% dble bgs ex-dock b.	50.00 : 51.50
e	Wattle Bark, bags	50.00 : 51.50 : .055 : 1.25
	Extract 55% dble bgs ex-dock D.	50.00 : 51.50

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Merz, Hamburg; Formic, 148 carboys, American Cyanamide Co., Hamburg; 50 demijohns, A. Klipstein Co., Hamburg; Tartaric,
100 bbls., Superfos Co., Genoa; Phosphoric,
50 carboys, Pfaltz & Bauer, Hamburg
ALCOHOL—Amylic, 2 cs., J. A. Natiello,
Hamburg; Denatured, 5 drs., J. C. Browne,
San Juan; 101 drs., Virgin Island Prod. Co.,
St. Croix

AETHYLEN-Dibromide, 37 bb.s., Potash Im. porting Corp., Hamburg
ALUMINUM-Hydrate, 2 cks., Order, Ham

burg
AMMONIUM-Carbonate, 3 cks., F. Rudloff,

Hamburg
ANTIMONY—Oxide, 14 cks., C. W. Leavitt
& Co., Havre; 100 bgs., Associated Metal &
Mineral Corp., Hamburg; Sulphuret, 200
cks., Michelin & Co., Bordeaux; 3 cks.,
General Rubber Co., London
ARSEN MEAL—50 cks., A. Klipstein & Co.,
Hamburg

Hamburg BARIUM-Chloride, 250 bgs., Order, Ham-

BARKS—Wattle, 4 203 bgs., Tannin Corp., Durban; 2,232 bgs., Tannin Corp., East London; 1,019 bls., American Extract Co., Durban; 565 bls., International Prod. Co.,

Durban

CALCIUM—Cyanate, 2 cs, Eissing Syndicate, Inc., Hamburg; Ph spheric, 5 bbls.,
Eissing Syndicate, Inc., Hamburg

BENZOYL—Chloride, 399 carboys, Order,

Hambu:g BONE-Precipitates, 1,000 bgs., C. H. Pow-

& Co., Antwerp O CARBONE-100 tons, E. R. Legg BORO Bordeaux

BORACITE-730 tons, Cuevitas Trdg. Co.,

CASEIN-833 bgs. Atterbury Bros., Burdeaux; 1,220 bgs., National City Bank, Buenos Aires; 500 bgs., Atterbury Bros.,

Buenos Aires; 500 bgs., American Kreuger & CELLOTDEN—, cs., American Kreuger & To'l Corp., Hamburg CHALK—500 tens, Taintor Trdg. Co., London; 500 tens, Taintor Trdg. Co., London; Precipitated, 200 bgs., 50 cks., H. J. Baker & Bro., Bristol; 50 btls., Schieffelin &

Precipitated, 200 bgs., 50 cks., H. J. Baker & Bro.. Bristol; 50 btls., Schieffe in & Co., Bristol

CHEMICALS—150 bgs., Roessler & Hasslacher Chem. Co., Bremen; 4 cs., N. Y. Quinine & Chem. Co., Hamburg; 11 cks., Jungman & Co., Hamburg; 7 cs., Eissing Syndicate, Inc., Hamburg; 150 bbls., Equitable Trust Co., Hamburg; 162 cs., Pfa'tz & Bauer, Hamburg; 18 cs., G. Gennert, Hamburg; 18 cs., G.

CHROME-Alum, 13 cks.. Genera! Dyestuff

CHROME—Alum, 13 cks.. General Dyestuff Corp., Rotterdam
COLORS—3 cks., Carbic Color & Chem. Co., Havre; 23 bbls., National City Bank, Antwerp; 20 cks., Nat. City Bank, London; 2 cks., Roessler & Hasslacher Chem. Co., Hamburg; Anlline, 8 cks., Geigy, Inc.. Havre; 10 pkgs., Carbic Color & Chem. Co., Havre; 112 pkgs., Ciba Co., Havre COBALSULFATE—4 cks., Roessler & Hasslacher Chem. Co., Hamburg
COAL TAR DISTILLATE—30 drs., Tar Acid Refining Co., Liverpoo'; 47 drs., Order, Liverpoo'; 47 drs., Order, Liverpoo'; 47 drs., Order, COCHINEAL—31 bgs., American Trdg. Co

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COPPERAS-71 bbls., J. C. Wiarda & Co.,

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CYANOGAS—75 drs., American Cyanamide Co., Alexandria DIOLENE—4 drs., Roessler & Hass'acher Chem. Co., Hamburg EARTH—160 bgs., G. Z. Col'ins & Co., Bristol; 27 cks., Order, Bristol; Colors, 33 cks., Reichard Coulston, Inc., Hamburg EXTRACTS—Quebracho, 1,538 bgs., M. E. Clarendon & Son, Buenes Aires; 50 bgs., A. K ipstein & Co., Buenos Aires

ENTFARBUNGS-67 drs., A. Klipstein & Co., Hamburg ETHYL PREPARATIONS-1 cs., American

Kreuger & Toll Corp., Hamburg EXTRACTS—Quebrache, 25,679 bgs., Tannin

EXTRACTS—Quebrache, 25,609 bgs., Tannin Corp., Buenos Aires

FERRO AMMON SULPHURIC—3 bb's.,
Eissing Syndicate, Inc., Hamburg

FERRO CHROME—100 cs., International Ore
& Metals Seling Corp., Havre

FERTILIZER—3,630 bgs., Kuttroff, Pick-

hardt & Co., Hamburg ORM POWDER-200 bbls.,

FORM POWDER—200 bbls., Roess er & Hasslacher Chem. Co., Hamburg GELATINE—79 cs., W. E. Miller, Havre GLUE—45 cks., British Bank So. America, Antwerp; 172 cks., W. E. Miller, Antwerp; 100 bgs., C. B. Hewitt & Bros., London; 20 cks., Order, Bordeaux; 300 bgs., National Gum & Mica Co., Bristel; 82 bgs., W. E. Miller, Havre GLYCERINE—22 drs., Marx & Rawolle, Antwerp; 19 ds., Order, Bristol; 40 drs., Procter & Gamble, Hamburg GUMS—Arabic, 513 bgs., T. M. Duche & Sons, Port Sudan; C.pul. 633 bgs., France, Campbe I & Dar.ing, Antwerp; 1,006 bgs., Paterson, Boardman & Knapp, Antwerp; 186 bgs., G. H. Lincks, Antwerp; 202 bgs.,

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don; 6 bgs., Thurston & Braidi: h, London; 25 cs. 266 bgs., Thurston & Braidich, Bombay; 50 bgs., Order, London

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MANGANESE—Carbonate, 8 bbls., Roess'er
& Hass'acher Chem. Co., Hamburg

MINERAL WHITE—67 bgs., Whittaker.
Clarke & Daniels, Hull

MYROBALANS—7,552 bgs., Armour & Co.,
Bombay; 2,000 pkts., Hammond Carpenter,
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NAPHTHALENE—142 bgs., Innis, Speiden &

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Co., Marseil'es; 50 cks., Whittaker, Cla:k &
Daniels, Marsei les; 2'4 cks., Reichard
Coulston, Inc., Marseilles

OILS—Cccutt, 685 tons, Philippine Refining Corp., Mania; 158 drs., Dearborn Chem.
Co., Ponce; Cod., 100 bbls., J. D. Irwin &
Co., Aberdeen; 360 bb s., Order, Hull; 275
cks., R. Badcock & Co., Halifax; 100 cks.,
J. Findlay, Halifax; 80 cks., Order, Halifax; 69 cks., Cook, Swan & Ycung Corp.,
St. Johns; 300 bbls., Order, Hu'l; 100 bb's.,
Nat. Oil Products Co., St. Johns; 100 bbls.,

Heavy Chemicals and T Other Industrial Raw

J. D. I:win Co., Aberdeen; 360 bbls., Order, Hull; C:d Liver, 1 bbl., Rus.h Fox Breeding Estates, Haifax; 250 bbls., E. R. Squibb Co., Haifax; Fusel, 6 bbls., Schenkers Co., Hamburg; Olive, 125 drs., Rhode Island Hospital Trust Co., Malaga; 200 drs., Webster & Atlas Nat. Bank, Malaga; 100 cs., First Nat. Bank Boston, Ma'aga; Sulphur, 600 bbls., Leghorn Trdg, Co., Bari; 20 bbls., Pa'molive Co., Bari; 200 bbls., H. cs., First Nat. Bank Boston, Ma'aga; Sul-phur, 600 bbls., Leghorn Trdg. Co., Bari; 2 tanks, Pa'molive Co., Bari; 200 bbls., H. W. Peabody & Co., Bari; 100 bbls., Leg-horn Trdg. Co., Naples; 150 bb's., H. W. Peabody & Co., Patras PHOSPHORUS-4 cs., Vglesias & Co., San

PLUMBAGO-667 bgs., Paterson, Boardman & Knapp, Colombo

& Knapp, Colombo
POTASSIUM SALTS—37 cks., Roessler & Hass acher Chem. Co., Hamburg; 2,980 bgs., Potash Syndicate. Antwerp; A'um, 134 cks., Reess er & Hassla her Chem. Co., Hamburg; 200 bbls., Innis, Speiden & C., Hamburg; Arsenate, 1 cs., American Kreuger & Tol! Co., Hamburg; Carbonate, 53 cks., Parsons & Petit, Hamburg; Caustic, 385 drs., A. Klipstein & Co., Hamburg; 249 drs., Order, Hamburg; Chlorate, 4,445 cks., Uniform Chem. Products Co., Hamburg: Nitrate, 200 bgs., 24 cks., Order, Hamburg; Titanium, 25 cks., Order, Hamburg; PYRIDIN—2 cs., American Kreuger & Tol! Corp., Hamburg

Corp., Hamburg
ROSIN-800 cks., Order, Bordeaux; 25 cs.,
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SESQUISULPHIDE PHOSPHORUS—10 cs., Order, Hamburg SHELLAC—700 bgs., American Exchange Pacific Nat. Bank; Calcutta; 300 bgs., Rogers. Pyatt Shellac Cc., Ca'cutta, 250 bgs., H. W. Peabody & Co., Calcutta; 100 bgs., MacLac & Co., Calcutta; 200 bgs., Nat. City Bank Calcutta; 400 bgs., Bank of London & S. America, Ca'cutta
SODIUM SALTS—Cyanide, 280 cans, C. Hardy, Inc., Havre; 560 cans, C. Hardy, Inc., Havre; 560 cans, C. Hardy, Inc., Havre; 560 cans, C. Hardy, Inc., Havre; 50 drs., Order, Liverpool; Nitrate, 12,932 bgs., Wesse!, Duval & Co., Antofagasta; 6,455 bgs., Ang'o-So. American Trust Co., Iquique; 3,178 bgs., Ang'o So. American Trust Co., Iquique; 19,491 bgs., Wesse!, Duval & Co., Iquique; 19,491 bgs., Wesse!, Duval & Co., Iquique; F'uoride, 34 bbls., Superfos Co., Hamburg STRONTIUM—Chicrate, 3 bbls., Eissing Syndicate, Inc., Hamburg

So. American Trust Co., Iquique; 19,491 bgs., Wessel, Duval & Co., Iquique; F'uoride, 24 bbls., Superfos Co., Hamburg STRONTIUM—Chicrate, 3 bbls., Eissing Syndicate, Inc., Hamburg SULPHUR—19 cks., Mallinck:odt Chem. Works, Bristo!

SUMAC—210 bgs., Medit & General Traders, Palermo; 100 bls., Order, Pa'ermo TARTAR—75 cks., Standard Bank South Africa, Marseilles; 200 bgs., Tartar Chem. Works, Marseilles; 100 pgs., C. Pfizer & Co., Marseil'es; 120 bgs.. American Exchange-Irving T'ust Co., Marseilles TETRACHLOR—Aethan, 5 bbls., Innis, Speiden & Co., Hamburg

den & Co., Hamburg
TITANTETRACHLORIDE-2 cs., Eissing Syndicate, Inc., Hamburg

UMBER-45 cks., Whittaker, Clarke & Daniels. Liverpool; Powder, 560 cks., Order,

VALONIA-1,917 bgs., Order, Trieste VARNISOL-73 drs., Virgin Island Prod. Co.,

ARRISOL—73 drs., virgin 1s.and Fiou, Co., St. Croix

VAX—53 bgs., W. Baumer Co., Bordeaux; 17 bgs., Nat. Bank of Commerce, A.exandria; 10 bgs., R. Desvernine, Havana; 8 bgs., T. J. Owen & Co., Havana; Bees, 100 bgs., Standard Bank of So. Africa, Lourenco Marques; 9 bgs., United Naval Stores, Danzig; 5 bxs., Bank of London & So. America, Rio de Janeiro; 60 bgs., Anglo-So. American Trust Co., Alexandria; 31 bxs., D. Steengrafe, Para; Carnauba, 125 bgs., J. H. Rossbach & Bros., Para; 168 bgs., S. P. Drummond, Para; 500 bgs., Aţkell & Douglas, Para; 65 bgs., Bank of London & So. America, Para; 329 bgs., Nat. City Bank, Para; 79 bgs., Nat. Bank Commerce. Para; 56 bgs., Nat. Park Bank, Para; 192 bgs., Lazard Freres, Para; 305 bgs., J. Mun-St. Croix

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bgs., Order, Hamburg; 3/3 bgs., Stronmeyer & Arpe. Hamburg

WHITING—1,500 bgs., Scott L. Libby Corp., Havre; 300 bgs., Taintor Trading Co., Hull WOOD TAR—902 bbls., Order, Danzig

ZYKLON—237 cs., Roessler & Hasslacher

WOOD TAR-902 bbls., Order, Danzig ZYKLON-237 cs., Roessler & Hasslacher Chem. Co., Hamburg WOOL GREASE-30 bbls., Davies, Turner & Co., Hull; 51 cs., Borne & Schrymser & Co., Antwerp

IMPORTS AT PHILADELPHIA Jan. 26 to Feb. 2

Jan. 26 to Feb. 2

ACID—Citric, 140 kgs., Order, Genoa; Formic, 84 crbys., Order, Hamburg CARBIDE—Si.icon, 625 bgs., Order, Genoa CHEMICALS—20 cs., Harshaw, Fu ler & Goodwin Co., Hamburg; 60 drs., Order, Hamburg; 20 cks., Order, Hamburg; 39 bbls., O'der, Hamburg; 2 cs., Order, Hamburg; 2 cs., Order, Hamburg; 2 cs., Order, Hamburg; 2 cs., Order, Hamburg; 2 cs.,

Order, Hamburg; 2 cs., Orde:, Hamburg; 21 cs., Order, Hamburg CLAY—',500 tons, Moore & Munger. Bristol; 700 tons, Moore & Munger. Bristol; 1,500 tons, United Clay Mines Corp., Bristol COLORS—Bronze, 9 cs., Order, Hamburg EARTH—Red, 50 cs.. Geo. M. Collins & Co., Bristol; 160 bgs., Geo. M. Collins & Co., Bristol; 160 bgs., Geo. M. Collins & Co.,

B: istol

GLYCERINE—10 cks., Harshaw, Fuller & Goodwin Co., Marseilles; 4° cks., Order, Marseilles; 290 cks., Order. Marseilles; 20 bb's., Order, Hamburg; 20 drs., Order, Antwerp; Crude, 43 drs., Oder, Genoa

GUM—Copal, 66 bgs., John H. Faunce, Inc., Liverpool; 38 bgs., Order, Antwerp:

Liverpool; 38 bgs., Order, Antwerp; Damar, 50 cs., L. C. Gillespie & Sons, Singapore; 150 bgs., Order, Singapore KAINIT—16,505 lbs., Potash Import. Corp.,

Hamburg

LIME—Chlorinated, 14 cs., H. Kohnstamm & Sons, Inc., Liverpool

MAGNESITE—1 bb!., Rohner, Gehrig & Co., Hamburg

Hamburg

OIL—30 cs., Picone Melchiorre, Pa'e:mo; 4
dks., J. A. Natillo, Palermo; 24 cs., Pipitone Guiseppe, Palermo; 1 bb'., Rosario
Gui'luto, Messina: Sulfaric Olive, 300
bbls., Order, Messina

CRE—Chrome, 3,300 tons, E. J. Lavino &
Co., Beira; Iron, 6800 tons, Phila.-Girard
Nat. Bank, Benisaf

OXIDE—Zinc, 75 bbls., Phi'ipp Bros., Antwerp

Werp
POTASH—Caustic, 90 drs., Innis Spieden &
Co., Hamburg; Muriate, 1,000 bgs., Potash
Import. Corp., Hamburg; 250 bgs., Potash
Import. Corp., Hamburg; Prussiate, 35
cks., Order, Hamburg; Sulfate, 250 bgs.,
Petash Import. Corp., Hamburg
POWDER—Braze, 8 cs., Keer, Maurer &
Co., Hamburg

Co.. Hamburg

PYRIDINE—9 drs., Order, Hamburg

SAL AMMONIAC—13 bb s., Order, Ham-

SALT-3,000 bgs., Order, Hamburg SODIUM—Nitrate, 106,477 bgs., E. I. du Pont de-Nemours & Co., Iquique; Su'fide, 29 drs., Harshaw, Fu'ler & Goodwin, Ham-

Jan. 29 to Feb. 5

ACID-Formic, 80 bals., R. & H. Chemical Co., Rotterdam; Oxalic, 40 cks., R. & H. Chemical Co., Rotterdam CASEIN-Ground, 1,247 bgs., First National

Bank, Buenos Aires CHALK-500 tons, Order, London; 900 bgs.,

Order, Antwerp GLUE-60 bgs., Order, London GLYCERINE-8 cks., O der, Rotterdam IRON-Oxide, 9 cks., Reichard Coulston, Liv-

erpool;
OIL—Cod, 4 bbls., Marden Wi'd, Yarmouth
OSSEINE—1,250 bgs., Order, Antwerp
SEEDLAC—300 bgs., Rogers, Pyatt Shellac
Co., Calcutta; 660 bgs., Ang o-South American Trust Co., Calcutta
SHELLAC—10 chts., Anglo-South American Trust Co., Calcutta
SODIUM—Risur Mate. 31 dvs., L. M. Sobin

Trust Co., Calcutta SODIUM—Bisu.phate, 31 drs., I. M. Sobin

Co., Antwerp WOOL GREASE-60 bb's. F. W. Damon, Liverpool; 100 bbls., Marden Wild Corp., Liver-

ZINC-Oxide, 50 bbls., E. & F. King & Co.,

Antwerp; Salt, 22 bbls., A. Klipstein Co., SHELLAC-100 bgs., W. R. Grace & Co., Calcutta

IMPORTS AT BALTIMORE Jan. 27 to Feb. 3

CHEMICALS—200 bbls., 43 tons Adams Express Co., West Mont, Liverpool
CLAY—Burnt, 81 cks., 60,799 lbs., Parsons &
Petit, New York, West Harcouvar, Ham
burg; Refractory, 300 bgs., B. & O. R. R.,
Pennsylvania, Havre
FERRO—Phosphi*, 1,132 cs., 606,351 lbs., W.
A. Mu'ler & Co., Inc., New York, McKeesport Havre.

FLUORSPAR-1,102,992 !bs., F. H. Shallus FLUORSPANCO, West Harcouvar, Co., West Harcouvar, Hamburg H. Masson, West Harcouvar, Hamburg MEDICINES—1 cs., 447 bs., B. & O. R. R., Wreet Harcouvar, Hamburg tons, Bethlehem Steel Tarafa; Iron, Tarafa; Iron, J.

MEDICINES—1 cs., 447 lbs., B. & O. R. R., West Harcouvar, Hamburg ORE—Chrome, 3,327 tons, Bethlehem Steel Corp., Emperor of Halifax, Tarafa; Iron, 9,000 tons. Bethlehem Steel Corp., Chilore, Could Grande; 11,000 tons. Bethlehem Steel Corp., Chilore, Cruz Grande; 11,000 tons. Bethlehem Steel Corp., Firmore, Cruz Grande; Manganese, 7,000 tons, United States Steel Products Co., Atlanta. Rio de Inneiro

PAPRIKA—5 bgs., 572 lbs., to crder, West Harcouvar, Hamburg
PEATMOSS—230 bls., Atkins & Durb:ow,

Holger, Bremen
PEPPER-700 bgs., McCormick & Co., Miss-

PEPPER—700 pgs., according to the sissippi London POTASH—81 cks., 60 799 lbs., Parsons & Petit, New York, West Harcouvar, Hamburg; Caustic, 100 drs., 55,829 lbs., F. H. Sha'us Co., West Harcouvar, Hamburg; Kainit, 389,400 lbs.. Potash Importing Corp., West Harcouvar, Hamburg; 199,540 lbs., F. West Harcouvar, Hamburg; 199,540 lbs., Parsons & Potas Sha'us Co., Kainit, 389,400 lbs., Potash Ing., 199,540 lbs., P. West Harcouvar, Hamburg; 199,540 lbs., P. H. Shallus Co., West Harcouvar, Hamburg; 333,502 lbs., Potash Imperting Corp., West Harcouvar, Hamburg; 500 bgs, 100,474 lbs., Potash Importing Corp., West Harcouvar,

Hamburg ROSIN-1 cs., G. N. Rukert, Kearny, Glas SADDLE SOAP-2 cks., William H. Masson,

Mississippi, London
SALT—250 sks., 25 tons, B. & O. R. R., West
Mont, Liverpoo'

SEAWEED-Crude, 15 bgs., William H. Masson, Kearny, Liverpool
SODIUM ARSENATE—24 cks., F. H. Shallus Co., Devisian, Liverpool

lus Co., Devisian, Liverpool
SUNFLOWERS—Grain, 96 bgs, 8,127 lbs.,
to o der, West Harcouvar, Hamburg
WHITING—600 bgs. 66,000 'bs., Continental
Whiting Co., McKeesgort, Havre

IMPORTS AT NEW ORLEANS Jan. 28 to Feb. 4

BENZINE—9,351 tons, N. O. Refining Co., Curacao; 7, 824 tons, N. O. Refining Co.,

-2,280 tons, Republic Mining Co.,

Georgetown COPRA-2,000 tons, O.der, Cebu FERRO MANGANESE-1 let, Order, Liver-

GUM—Chicle, 685 bls., Wm. Wrigley Co., Curacao; 678 bls., I. C. R. R., Progresso LIME—Chlorinated, 115 cs., Order, Liverpool MOLASSES—54°,339 gals., Order, Sagua OIL—Olive, 40 cs., Order, Barcelona; Creosote 3,920 tons, American Creosote Co., Antwern

SODA-Nitrate, 34,407 bgs., W. R. Grace, Iquique; 21,272 bgs., E. I. du Pont de Nem-ours, Iquique

IMPORTS AT SAN FRANCISCO

Jan. 22 tv 29

CHEMICALS—105 cks., Order, Rotterdam

COPRA—431 tons, Vegetable Oi' Corp., Zamboanga; 106 tons, Kidder, Peab dy Acceptance Corp., Davao; 195 tons, El Dorado
Oil Works, Davao; 1,045 tons, J. E. Higgins Lumber Co., Sipaco; 626 tons, Vegetable Oil Corp., Cebu; 1,045 tons, Sul'ivan
& Co., Cebu; 250 tons, E' Dorado Oil
Works, Mani'a

FULLER'S EARTH—60 cs., L. H. Butcher

FULLER'S EARTH-60 cs., L. H. Butcher Supply Co., Leghorn Supply Co., Leghorn
GLYCERINE—40 drs., Order, Retterdam
OAKUM—400 bales, C. J. Hendry, Liver

OIL—Cod, '00 bb's., Wilbur Ellis Co., Kohe; Palm, 5 cks., Ba'four, Guthrie & Co., Liverpool

EXPORTS AT NEW YORK

ACETONE-239 drs., Jan. 18, London; 10 drs.,

ACETONE—239 drs., Jan. 18, London; Ac urs., Jan. 13, Barceiona ACIDS—8 bb's., Jan. 14, London; Acetic, 3 bb s., Jan. 14, Santiago; 10 carboys, Jan. 14, Ca lao; 2 cs., Jan 14, Havana; Sulphuric, 10 demijohns, Jan. 3, Algea Bay; 10 demijohns, Jan. 3 East London; 10 drs., Jan. 3, Port Natal; 2 drs., Jan. 15, Pto

Ammonium—Anhydrous, 10 cyls., Jan. 14, Port of Spain; 12 cyls., Jan. 4, Port au Prince; 4 cyls., Jan. 21, Progresso; 1 cyl., Jan. 15, Port au Prince; Sulfate, 10,800 bgs., Jan. 11, Havana

Jan. 11, Havana
AMMOPHOS—15,480 bgs.. Jan. 22, Yokohama AMYL-Acetate, 2 drs., Jan. 11, Havana

ASPHALT—500 bbls., Jan. 14, Liverpool; 4,657 bbls.. Jan. 19, Brisbane; 7,538 bbls., Jan. 19, Adelaide; 6,189 bbls., Jan. 13, Marseilles; 344 drs., Jan. 17, Montevideo; 14,030 bb's., Jan. 24, Havre; 1,507 bbls., Jan. 26, Monte-

BLOOD—Dried; 29 drs., Jan. 22, Kobe BONE BLACK—60 bbls., Jan. 14, London BORAX—325 sks., Jan. 15, Havana CALCIUM—Arsenate, 1,000 drs., Jan. 14, Callao; Carbide, 30 drs., Jan. 22, Manaos; 5 drs., Jan. B, Banes; 500 drs., Jan. 19, Pres-

ton
CARBIDE—20 drs., Jan. 21, Progreso
CARBON BLACK—25 cs., Jan. 18, London
CHEMICAL LIME—600 bgs., Jan. 10, Nassau;

16 bgs., Jan. 21, Buenaventura
COAL TAR—15 drs., Jan. 19, Banes
COAL TAR DISINFECTANT—15 drs., Jan.

COAL TAR DISINFECTANT—15 drs., Jan. 14. Santiago
COLORS—19 cs., Jan. 14. Cienfueg s
COPPER SULFATE—200 kgs., Jan. 26.
Buenos Aires; 3 kgs., Jan. 15 Pto Co'mbo
CORN STARCH—200 cs., Jan. 10. Nassau; 45
cs., Jan. 3, Luderitz; 485 cs., Jan. 3, Cape
Town; 200 cs. Jan. 3, A'goa Bay; 350 cs.,
Jan. 3, East London; 800 cs., Jan. 3, Port
Nata'; 255 cs., Jan 3, De'agoa Bay; 400
bgs., Jan. 14, London; 250 bgs., Jan. 10.
Bei'ut; 48 bgs, Jan. 10, Jaffa; 25 bb's.. Jan.
1. Dublin; 20 bdls., Jan. 21, Buenaventura;
30 cs., Jan. 15, Port de Paix; 500 bbls., Jan.
26. Montevideo
CORN SYRUP—5 bbls., Jan. 3, Algoa Bay;
60 bb's. Jan. 7, Southampton; 60 bb's., Jan.

60 bb's. Jan. 7, Southampton; 60 bb's., Jan. 14, L'ndon; 60 bbls., Jan. 15, Havana CYANIDE—",000 drs., Jan. 3, Beira; 12 cs., Jan. 19, Sydney; 1,000 drs., Jan. 3, Valen—

CYANOGAS-40 drs., Jan. 6, Lendon

ETHER ACETIC—1 cs., Jan. 14, Santiago; 1 cs., Jan. 24, Montevideo
EXTRACTS—Dogwood, 9 bb s., Jan. 20, Nor.

rokoeping FELLOWS SYRUP-60 cs., Jan. 14. Callan FORMALDEHYDE—15 bbls., Jan. 11, Havana: 1 cs., Jan. 11, Havana
FULLER'S EARTH—148 bgs., Jan. 20 Bor

GLAUBER SALTS-5 cs., Jan. 14, Cienfuegos;

GLAUBER SALTS—5 cs., Jan. 14, Cienfuegos; 10 kgs., Jan. 24, Buenaventura GLUCOSE—15 bbls., Jan. 6, London: 10 bbls., Jan. 3, Capetown; 55 bb's., Jan. 3, Capetown; 75 bb's., Jan. 3 Port Natal; 1'5 bbls., Jan. 10, Piraeus: 120 bb's., Jan. 10, Constantinople; 30 bbls., Jan. 10, Constantinople; 30 bbls., Jan. 10, Constantinople: 180 bbls., Jan. 10, Alexandria; 40 bbl's., Jan. 10, Beirut; 80 bbls., Jan. 10, Jaffa; 60 bbls., Jan. 66, Buenos Aires

Beirut; 80 bbls., Jan. 10, Jafta; 60 bbls., Jan. 6. Buenos Aires
GLUE-55 bgs., Jan. 11, Havana
GUMS-Chice, 45 cs., Jan. 14, Liverpo';
Conal 10 bls. Jan. 21, Pto Colombo
HYDROGEN-Peroxide, 15 cs., Jan. 22, Para;
7 cs., Jan. 14, Malendo: 113 cs., Jan. 21,
Buenaventura; 103 cs., Jan. 21, Buenaven-

HYPOPHOSPHITE SYRUP-349 cs. Jan. 1.

Dublin
LIME—80 cs., Jan. 20, Copenhagen; Ch'oride;
600 cks. Jan. 18. Havana
LINSEED OILCAKE—4,000 bgs. Jan. 15.
Belfast: 637 bgs., Jan. 1, Cock: Meal, 2 634
bgs. Jan. 55. Be'fast
LINGERIUM Sulfate. 1 keg. Jan. 19, Pres-MAGNESIUM-Sulfate, 1 keg. Jan. 19, Pres-

ton
MALT—48 bgs., Jan. 17. Buenos Aires
METHYL—Chloride 1 dr., Jan. 19. Syd
1 dr. Jan. 17 Buenos Aires
NEUTRASOL—3 bbls., Jan. 19, Sydney Jan. 19, Sydney:

(Continued on page 262)





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Virginia Smelting Company

Largest American Producers SO₂

F. A. EUSTIS, Secretary

Boston New York Norfolk

NITROGEN

(Continued from page 199)

profits of £1,300,000, at the rate of 38% on the capitalization, or \$11 per ton for the 600,000 tons of nitrate sold. It will be remembered that this was by no means a record nitrate year, but it seems splendid enough compared with current returns. Five of the leading companies whose total par value capitalization is £3,-100,000, decreased during the year just past from £3,-578,000 in January to £1,634,000 in December.

	Share	-Mark	et price-		1926
Company	parity	Dec. 31,'20	Dec. 31, '2	Highes	t Lowest
Lautaro	. 5	33/8	61/8	61/2	3
Liverpcol	. 1	11/8	21/2	23/4	1
New Paccha	. 1	3/8	1	1	3/4
Salar del carmen	1	0.5/8	21/2	3	13/4
Rosario	. 1	7/8	13/8	13/8	3/4
Note-The figures in	n the	above tab'e	represent	pounds	sterling.

The competitive battle is going to be fought out along price lines. Friends of nitrate of soda point out, with a wealth of agricultural data to support their statements, that it is the best nitrogenous fertilizer; and that already farm fertility experts, especially in Germany, are advocating a return to its use. This might be prompt and world-wide provided nitrate might be sold at competitive prices. For certain crops, surely, there is good ground for these claims, and with the continuously increasing applications of plant food to agricultural land the world over, there would be no reason to despair of holding a large and profitable market for nitrate. But to do this nitrate must meet the price competition of synthetic and by-product nitrogen. Costs are therefore of paramount consideration.

In 1924 Bain and Mulliken made a Nitrogen Survey for the U. S. Department of Commerce (Trade Information Bul. No. 170). They set up as the marginal producer, an oficina treating a million tons of caliche yearly, and producing one ton of nitrate for each 8 tons of raw material handled, at the following costs.

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																.55
1	4															.13
										6						.27
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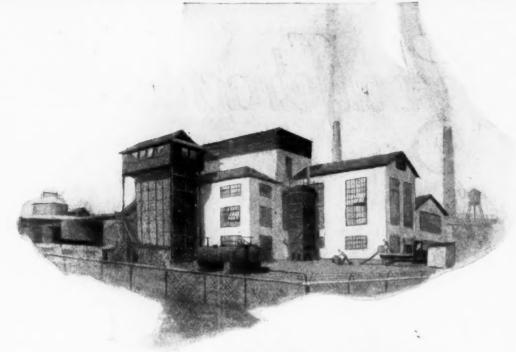
This gives a total cost of production, naked at the plant, of \$12.96 per ton of finished nitrate. Secondary costs to bag the material, transport it to the port, pay the tax, and lay it f.a.s. total, \$15.72. Of these secondary costs, which it is to be noted are greater than the primary costs of production, there is \$10.46 in export tax.

This tax offers some knotty problems. It has for many years furnished half the revenue of the Republic of Chile. It is easily justifiable on the economic ground that nitrate exports are a depletion of natural resources, and in the main it has been wisely administered and beneficial to the country. The proceeds have built roads and docks. They lighten the tax burden on the people. But danger lurks in any Government's income derived so largely from a single source. This has been recognized, and tax revision has long been debated in the Chilean Congress.

For the past two years the Government has been actively petitioned to remove this tax and severely criticized for not assisting the nitrate producers to anticipate competition by lower nitrate prices so as to discourage further expansion of the synthetic industry. Doubtless this could have been at least temporarily useful. But that time is past. The present situation is such that unless the Government removes the tax next June, they will be faced with having no nitrate exports to tax.

Of costs more directly in the control of the producers

(Continued on page 250)



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Patents Latest Issues Covering Chemical Products and Processes.

TO SECURE COPIES OF PATENTS

U. S., 10c U. S. Patent Office, Washington. British, draft on London, one shilling, British Patent Office, 25 Southampton Bidgs., Chancery Lane, W. C. 2, London. French one franc, Minister of Commerce & Industry, Paris. German, draft on Berlin, one mark, German Patent Office, Berlin.

Application date appears with each patent.

UNITED STATES PATENTS Issued Jan. 25, 1927

1,615,208.—Alka'i Metal Cyanide Solu-tions. K. Andrich, Frankfurt, Germany, assignor, Roessler & Hasslacher Chemi-cal Co., New York. Dec. 22, 1925.

1,615,231.—Waterproof Abrasive. H. R. Power, Niagara Fals, N. Y. Assignor, The Carborundum Cerp. June 21, 1923.

1,515,247.—G ass Composition. W. C. Taylor, assignor, Corning Glass Works, Co. ning, N. Y. Nov. 2, 1922.

1,615,271.—Abrasive. M. L. Hartmann, assignor, The Carborundum Co., Niagara Falls N. Y. Mar. 14, 1924.

1,615,286.—Refining Hydrocarbons. O. D. Lucas and E. L. Lomax, Westminster, England, assignor, V. L. Oil Processes, Ltd. Apr. 30, 1924.

1, 15,287.—Concentrating Fluids. W. B. McLaughlin. New York. Jan. 17, 1923.

1,615,303.—Bituminous Emulsions, process. L. Kirschbraun, Chicago. Nov. 21, 1919

1,615,343.—Treating Cel'ulese. F. Olsen, Dover, N. J., and H. A. Aaronson, New York. Nov. 9, 1925.

% 615. 353 .- Absorption Method and Ap-E. A'tenkirch, Alt Landsberg-ignor, Siemens - Schuckertwerke assignor, G.m. b.H., Berlin. Feb. 7, 1925.

1,615,384.—Pyrogenetic Conversion of Hydrocarbon Oils. F. A. Howard, Eliza-beth, N. J., E. M. Cark, New York. and J. R. Carringer, Elizabeth, assignors, Standard Development Co. May 23, 1921.

1,615,400.—Distillation of Hydroca ben Oils, apparatus. M. G. Paulus and O. C. Brewster, Casper, Wyo., assignors, Stand-ard Oil Co., Whiting, Ind. Feb. 27, 1924.

1,615,407.—Continuous Distilation of Crude Petroleum. F. M. Rogers, Whiting, Ind., and R. E. Wilson Chicago, assignors, Standard Oil Co. Oct. 11, 1924.

6,615,463.—Artificial Fue' and process.

I. F. Maginnis, Philadelphia. Sept. 25,

1.615,479.—Oil Distillation Apparatus. P. I. Poole, Tulsa, Oka., assignor, The Bown Instrument Co., Philadelphia. Brewn Ins Ju'y 6, 1925.

1,615,505.—High Temperature Thermometer. G. W. W. Cormman and R. P. Brown, assignor, The Brown Instrument Co. June 2, 1922.

Lossey, Jackson Barium Carbonate. J. E. Marwedel and J. Looser, Honningenon-the-Rhine, assignor, Rhenania Verein Chemischer Fabriken A. G., Aachen, Germany. Oct. 21, 1922.

1,615,535 .- Synthesis of Ammonia by Hyperpressures. G. Claude, Paris. assignor, Lazote, Inc. Nov. 19, -92.

1,615,50-1.—Trisazo Dyestuffs and process. J. B. Oes.h. Milwaukee, assignor, The Newport Co., Carrollville. Wis. Feb. 6, 1926.

1, 15,559.—Screening Apparatus. Tark, Phi'adelphia. Sept. 14, 1923.

1,615,583.—Oil Cracking Stil'. E. C. Herthel, East Chicago Ill., assignor, Sin clair Refining Co., Chicago. Nov. 28, 1921.

1 615,584.—Sizing Composition. Herve, M. Herve and A. He ve, Levallois-Perret, France. July 16, 1925.

1,615,597.—Lew Temperature Coo'Liquefaction and Separation of Gases.

Seligmann, Bremen, Germany. Mar. 3,

1.615.606.—Testing Detonators, L. Moehler, Darmstadt, Germany. Apr. 8, 1925.

1,615,637.—Hydrocyanic Acid from Cyanides. H. Lehrecke, Frankfurt, assignor, Roessler & Hasslacher Chemical Co., New Yerk. Nov. 21, 1925.

1,615,646.—Making Dyes. W. Penecke, Graz, Austria, assignor, Felice Beusa, Italy. Apr. 7, 1925.

1,615,659.—Carbon Disulphide. 'er, Griesheim, assignor, I. G. Farbenin-dustrie A. G., Frankfurt. June 29, 1925.

1,615,672.—Tank Car. S. F. Beasley, Kansas City. Kan. May 5, 1924. 1,615,673.—Base for Paints. S. J. Beebe, Endicott, N. Y., assignor Endicott-Johnson Co. May 31, 1924.

son Co. May 31, 1526.

1,415,751.—Cast Refractory Product. G. S. Fulcher, Corning, N. Y., assignor, Corning Glass Works. July 27, 1926.

1 615,756.—Polishing Compound. C. D. Hall, Detroit. June 7, 1926.

14615,770.—Preparing Pearl Essence. J. Paisseau, Courbevoie, France. Aug. 19,

1,615,779.—Cracking Oi!.—F. E. We?!man, assignor, The Kansas City Gasoline Co., Kansas City, Kans. July 10, 1922. assignor,

1,615,816.—Pigment. C. Dickens, Oakland, Calif. Feb. 4, 1924.

BRITISH PATENTS

Dec. 30, 1926

260,602.—Lubricants. A. E. Becker, Elizabeth, N. Y., assignor, Standard De-velopment Co., New York. Oct. 28 1926. Becker,

Farbwerke 260,604.—A' kylnaphthalenes. Farbwerke vorm. Miester, Lucius & Bruening, Hoechst, assigners, I. G. Farbenindustrie A. G., Frankfurt. Oct. 28, 1926.

260,620.—Devulcanizing Rubber. A. Mrach, Milan, Italy assignor, Soc. Italiana Pirelli. Oct. 29, 1926.

2,0,621.—Asphalts. H. H. Schroeder, Rijswijk, Hol'and. Oct. 30, 1926.

260,623.—Halogenated Naphthylthioglycol-lic Halides. Society of Chemical Industry in Base, Basel, Switzerland, Oct. 30,

260,637.—Uti'izing Waste Rubber. H. Gray, assignor, B. F. Goodrich Co., New York. Nov. 2, 1926.

260,639-40.-Iron Carbonyl Badische Anilin & Soda Fab ik, Ludwigshafen. 2, 1925. May

260,646.-Treating Ferrous Material. Westberg. Pittsburgh. June 2, 1925.

260.647.—Leuco Compounds of Vat Dyes. L. Wy'am, J. E. G. Harris, and Scottish Dyes, Ltd.. Grangemouth, Stirlingshire. June 4, 1925.

260,650.—Cellu'ose Formate. Fabriek van Chemische Producten and A. Ter Horst Schiedam, Ho'land. June 30, 1925.

260, 52.—Impregnating Leather. N. J. S. Nunn, Spalding Lincolnshire, and K. P. Padshaw, Lendon. July 3 1925.

260,666.—Carbon. L. H. Bonnard, and A. H. Bonnard, London. Aug. 4, 1925.

260,681.—Artificial Silk. H. Bass, Prague, and Erste Bochmische Kunsteide-fabrik A. G. Arnau, Czechoslovakia. Aug. 5, 1925.

260,682.—Forming Dyes on Material. Badische Ani'in & Soda. Fabrik, Ludwigshafen. Aug. 5, 1925.

360,686.—Recovering Tar Acids. H. W. Rebinson, Birmingham, and D. W. Parkes, West Bromwich. Aug. 7, 1925.

260,69".—Crystallizing. Grasselli (ca. Co., Cleve and. Aug. 11, 1925. Grasselli Chem-

260,699.—Filtering Oil. C. S. Gar'and and T. E. Beacham, Westminster, Aug. 18, 1925. S. Gar'and

2:0,718.—Detergents. H. A. Scriven, Studley, Warwickshire, and B. F. G. Guise, Redditch, Worcestershire. Sept. 12,

260,741.—Sieving Fine Powders. G. Gal-lie, B. E. Porritt and Research Associa-tion of British Rubber & Tyre Mfrs., Croyden, Surrey. Oct. 7, 1925.

260,745.—Mixing Apparatus. J. B. Par-nal', London. and W. W. Veitch, Liver-pocl. Oct. 10, 1925.

260,757.—Coo'ing Water and Moistening Air. E. C. Nicho'ls, Manchester, and G. T. Newton, Parple, Cheshire. Oct. 21,

260,760.—Cooling Liquids. Stratmann & Werner and F. Werner, Leipzig. Oct. 24,

260 802.—Hydro Extractors. Baker Perkins, Ltd., and D. Y. B. Tanqueray, Peterborough. Dec. 22, 925.

260,830.—Scluble Chromium Compounds of Azo Dyes. Society of Chemica! Industry, Basel, Switzerland. Feb. 22, 1926. Azo Dyes.

260,833 — Fibrous Paints. G. E. Hey!, Vestminster, and O. Kunze, Anhalt, Ger-Westminster, and O. many. Feb. 26, 1926.

260 882.—Manures. P. Rippert, He'm-stedt, Germany. May 26, 1926.

260,885.—Chrome Alum. I. G. Farbenin-dustrie A. G., Frankfort. May 38, 1926. 260,888.—Protecting Chemical Apparatus. I. G. Farbenindustrie A. G. June 2, 1926.

20,896.—Drying Salt and Sugar, etc. G. Hilgenberg, Hanover, Germany. June 11.

260,899.—Separating Liquids from Gases. J. R. Ster'ing, Westminster. June 14 1926. 260,908.—Fo maldehyde Polymers. I. G. Farbenindustrie A. G. June 26, 1926.

260,914.—Drying Gases. I. G. Farbenin-dustrie A. G. Ju'y 6, 1936.

260,930.—Thioindigo Dyes. Farbwerke verm. Meister Lucius & Bruening, Hoechst, assignor, I. G. Farbenindustrie A. G. May 25, 926.

GERMAN PATENTS

Issued Jan. 6, 1927

437, 54.—Baking Powder Composition. I. Farbenindustrie A. G., Frankfurt. Jan. 10 1925.

436,985.—Heat Transfer Apparatus. Morterud, Torderoed, Norway. Oct

437,047.—Apparatus Protected Against Heat. Mechanical Wear and Corrosive Substances. Saereschutz G.m.b.H., Ber in-Altglienicke. Aug. 26, 1925.

436 997.—Hydrosulphite and Derivatives. I. G. Farbenindustrie A. G. Jan. 16, 1924. 436,998.—Continuous Purification of Crude Carbon Disulphide. Dr. E. Legeler and Dr. P. Esse'mann, Premnitz. Sept. 4, 1924. 437,113.—Stable Mixtures Evolving Carbon Dioxide. I. F. Schwarz'ose Sochne G.m. b.H., Berlin. Dec 24, 1925.

436 999.—Ch'orine Derivatives of Ethane. G. Fa benindustrie A. G. Mar. 30, 1921. 437,000. - Ethylena Dichloride. Un Carbide Co., New York. May 11, 1900.

437,159 — Beta Beta Dihalogen Ethers from Olefines. Dr. W. S. hoe'ler, Berlin-Westend. Ju'y 8, '923.

437 160 .- Ha'ogenated Alcohols from Halogen-containing aldehydes. I. industrie A. G. June 13, 1924. I. G. Farben-

Products from nchen. Feb. 18, 437,001.—Decomposition Produ Keratin. E. Jena, Muenchen.

437 002.—Amino Oxy Derivatives of Aromatic Series. Chemische Fabrik Gruenau Landshoff & Meyer A. G., G uenau, Mark. Oct. 24, 1923.

437,048.—Purifying Benzine. Stinnes, Essen. Oct. 18, 1923. Z. M.

437,071.—Azo Colors. I. G. Farbenindustrie A. G. June 18, 1924.

437,193-4.—Dyestuff Binding Agent. Dr. E. Stern. Char ottenburg. Jan. 20, 904, E. Stern, Char of and May 20, 1924. Char ottenburg.

437,168.—Ageing Gum Arabic. Zimmerer Werk Chemische Fabrik, Landshut. Feb.

77, 1925. 437,010.—Extraction of Bituminous Substances. I. G. Farbenindustrie A. G. Nov.

437,210.—Obtaining and Decomposition of Bitumens. Deutsche Erdoel A. G., Berlin-Schoeneberg. Nov. 12, 1925.

437.245.—Pasty Detergent. M. germ Stuttgart. Feb. 12, 1924.

437,054.—Tannins Soluble in Co'd Water. I. G. Farbenindustrie A. G. Feb. 1, 19:0. 437,097.—Obtaining Kaolin. F. Krupp Gruesonwerk A. G., Madgeburg-Buckau

July 17. 1925.

437,242.—Manufacturing A'uminous Ce-

FRENCH PATENTS Issued Dec. 23, 1926

618,651. — Promoting Oxidation. The Roessler & Hass acher Chemical Co. July 7, 1926.

618,655.—Oxidizing Carbon. C. F. gess Laboratories, Inc. July 7, 1926.

618,871.—New Products and Use. Peiny. Nov. 20, 1925.

618,916.—Chromium Compounds. Farbenindustrie A. G. July 13, 1926.

618,917.—Treating Gases and Vapors by Electricity. I. G. Farbenindustrie A. G. July 13, 1926.

618 954.—Concentrated Acetic Acid from pyro'igneous acid. H. Suida. July 1,

618,973.—Organic Arsenic Compounds. Deutsche Gold und Silber Scheideansta t vorm. Roessler. Ju'y 15, 1926. 618,973.—Organic

619,022.—In reasing Useful Effect of hemical Products. Verein fuer Chemische Chemical Products. A. G. July 1, 1926.

619,035.—Ferric Su'phate. B. Hart Har-is Hart & Co., Ltd., and Refiners, Ltd. ris Hart & July 17, 1926.

618,592.—Benzanthrone Nitri'es. Kalle & A. G. Nov. 26, 1025.

618 634 .- Grinders for Fine Co'ors, etc. Buhler Freres. July 6, 1926. 618,663.—New Diazo More

618,663.—New Diazo Mordant Colors.
Durand et Huguenin S. A. July 7, 1926.
618,854.—New Chrome Azo Co'ors. Societe pour l'Industrie Chimique a Bale.
July 13, 1926.

619,006.—Azo Co'ors. I. G. dustrie A. G. Ju'y 16, 192 (618,647 and 618,674.—Prod G. Farbenin

618,647 and 618,674.—Products Liquefaction of Carbon by Hyd tion. Internationale des Comb by Hydrogena-s Combustibles Liquides. July 7, 1926, and Ju'y 8, 1926.

618,685.-Dehydrator for Oi' Emulsions De Bataafsche Petroleum Maats happij and J. H. C. De Brey. July 8, '926.

618,714.—Causing Phenol Vapors to React with Gas at high temperature. A. Irinyi. June 10, 1926.

618.896.-Treating Hydrecarbons. ciete Anonyne Hydrocarbures et Derives. Nov. 24, 1925.

618.958 -Stable Soans. A. Welter. July 1, 1926.

618,740.-Treating Resins. H. G. Hjerpsted. July 10, 1926.

(18,918. — Aqueous Paraffin Emulsio Chemische Fabriken Dr. J. Wiernik Co., A. G. July 13, 1926. Emulsion.

6 8,605.—Product of High Absorbent and Catalytic Powers. Societe de Recherches d'Exploitations Petroliferes. 1925

618,665.—Separating Gaseous Mixtures. Air Reduction Co., Inc. July 7, 1926.

q18,724.—Thickening or Filtering Liquids nd Pastes, apparatus. O'iver Continuous and Pastes, apparatus. (Filter Co. July 9, 1926.

618,9-9.—Separating Volatile Matter from Non Volatile. E. Wecker, June 21, Matter

618,996.—Decanting Waste Waters containing Hydrocarbons. C. Marquignon. July 16, 1926.

619,029.-Distilling Co'umn. P. Cheva-

let. July 17, 1926.

618,611. 2.—Treating Wood with Ozone.
M. P. Otto. Nov. 19, 1925.

(78,742.—Plastic Compositions. The Selden Co. July 10. 1926.

618,991.—C'ear Condensation Products from Urea. Dr. H. Traun & Sohne vor-mals Hargurger Gummi, Kamm Co., Ju'y

New Incorporations

S. M. Schwartz & Co., Paterson, N. J.; \$15,000; printing and yeing si'ks; Peter Hofstra, Joseph V. Fumagalli, Samual M. Schwartz.

Solvay American Investment Corp., Dever. De'.; \$30,000,000; (300,00 sha:es of no par value); T. L. Croteau .

Platinum Pazer Exploration & Reduction Co., Ltd., Wilmington, Del.; \$1,000,000; minerals.

Northwestern Pu'p & Paper Co., Wi'mington, Del.; \$500,000. Southern States Mineral Co., Wilmington, Del.; \$51,000.

Dixiana C ay Co., Dover, Del.; \$50,000; metals.
Federal Fertilizers, Ltd., Winnipeg, Manitoba; \$40,000 and 2,000 shares of no par value; Mi'ton S. Walker, John McLean, 000 shares of no William Mcxam.

Sherman Paper Products, Ltd., Montreal, Que.; \$50,000; Robert son Fleet, Doug'as C. Abbott, James G. Nicholson.

Hawthorn Mills, Ltd., Cauleton Place, Ont.; 4,000 shares without par value; manufacture textiles; Ernest H. Stewart, Rebert Gowan, James T. Gow.

Silcox Smokeless Coa! Co., Wilmington, De'.; \$1,000,000; coa', metal, clay and mineral lands.

In'and Glass Mfg. Co., Dover, De!., \$700,000.

Imperial Dyers, New York; \$0,000; dye furs; R. Zimmerman, H. Adler, H. Kuna.

Hudson Dyestuffs Corp., New York; 300 common, no par; M. D. Brogan, M. V. Dempsey.

National Varnish Co.'s Paint Products Corp., New York; 2,000 shares, \$100 each; 100 common, no par; F. W. Herz, E. J. Rotheim,

Harbow Chemica'. Corp., New York; 100 shares, \$100 each; 100 common, no par; T. V. Armour, A. P. Acott.

New England Chemica! Co., Norwich, Conn., \$100,000; manufacture dyes and cellulose colors; James F. Quinn, Jane G. Quinn, M. T. Quinn, Beatrice Rau, Zera G'eenhalgh.

Henderson Oil Co., Wilmington, Deh; \$50 000; coal, minerals. Milroy Products, Inc., Wi'mington, Del.; \$30,000; soap and cleaning products

Teddy Tints, Inc., Camden, N. J.; \$100,000; manufacture dyetuffs; Charles L. Hammel', John J. MacNamara. Charles R.

Si'k Products Corp., Wilmington, Del.; \$10,000; T. L. Croteau. Miracle Ceaning & Dyeing Co., New York; \$20,000; E. Serlen, Bleecker, S. Greenberg.

Roseth Chemical Division; New York; \$12,000; chemical poducts; M. Frest, A. Stone, S. Friedman.

Nestel Products Co., New York; 180 shares, Class A, \$100; 10 Chass B, no par; L. P. Nestel, H. L. Horahan.

Safety Carboy Ho'der & Truck Corp., New York; \$10,000; H. A. Dorr, F. L. Dorr, H. A. Paysen.

Electria Rayon Corp., Passaic, N. J.; \$24,000; artificial silk; Daniel A. Martin, Jos. V. McGuire, Grace A. Brown.

Manson Chemical Co., Montelair, N. J.; 1,000 shares, no par; Harry C. Hand, Samuel C. Wood, Withiam M. Stevens.

Alabama Tripoli Corp., Wilmington, Del.; \$570,000; gold. silver,

Wells High Speed Gas, Wilmington. Del.; \$210,000; petroleum, by-products

Economy Paint Co., Dever, Del.; \$30,000; Kenneth R. Cunning-

Portland Dye Works, New York; \$10,000; L. Greene, H. Greene, H. Merowitz.

R. H. Agrest, New York; \$5,000; dyeing and bleaching; J. Hirschfield, O. Bellick, B. Brotman.

Altro Smelting & Refining Co., New York; \$50,000; A. Turman, Turman, I. J. Rifkin.
Capra Fi'ter Press Corp., Wilmington, Del.; \$100,000; patents

and patent rights.

Murdoch & Spear, New York; \$10,000; cleaning and dyeing compounds; M. J. Hertel, F. J. Murdoch, L. Spear.

Genera! Silk Corp., Dover, Del.; \$\$8,500 000 (35,000 shares, \$100 par, participating preferred stock and 550,000 shares of no par value stock divided into 100,000 shares class A and 450,000 shares common stock); silk, cotton. "inen and other fabrics; Raymond J. Gorman, Harry C. Hand, Samuel C. Wood.

Carbon, Inc., Dover, Del.; \$1,500 000; fuels; J. F. Shelton. Bostonia Coal & Clay Products Co., Dover, Del.; \$1,000,000; coal, coke; H. J. Wheeler.

Antimony Lead Sme'ting & Refining Corp., Dover Del.; \$1,000,000; minerals; Harry C. Hand.

Mammoth Vein Mining Co., Dover, Del.; \$10,000; coal and mineral lands, McA'ester, Okla.; J. G. Puterbaugm.

Service Supply Co., Perth Ambry, N. J.; \$10,000; manufacture porcelain ware; N. He'ler, Peter Jensen, Olga Jensen, Bernard

Co'lway Laboratories, Inc., Newark, N. J.; 1,000 shares, no par va'ne; chemicals; William D. Bingham, Robert J. O'B:ien, Jr.; Charles Hood.

North Shore Coke & Chemical Co., Wilmington, Del.; \$1,700,000; machinery; T. L. Croteau.

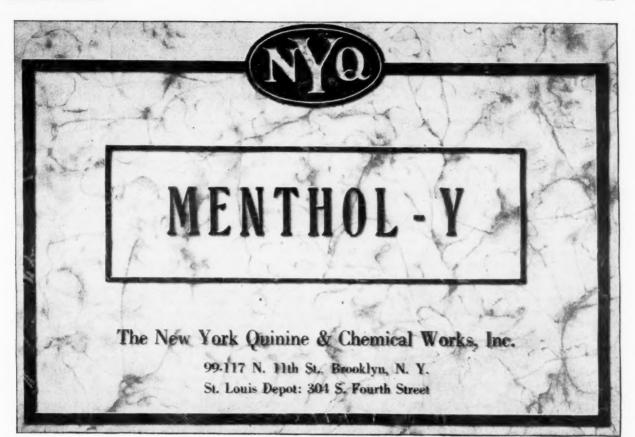
Crassocial Holding Corp., Wilmington, Del.; \$100,000; T. L. Croteau.

Barth & Co., Inc., Dover, Del.; \$10,000; soap, C. W. Barth. Fyco Laboratories, New York; \$10,000; chemicals; J. W. Blohm, Wang, F. D. Hartman.

Viking Laborator W. Schwalbach, Laboratories, New York; \$10,000; chemica's; J. Maas, T.

K. I. W. Dyeing Co., Inc., Paterson, N. J.; \$25,000; F. ederick W. Krayer, Carmine Iannuzzi, Charles Williams.

Pratt Reduction Co., Coylesville, N. J.; \$250,000; coal, coke; Va'do F. Wi'son, L. F. Pratt, Rebert West.





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NITROGEN

(Continued from page 246)

the most promising opportunities for saving appear to be in increasing the yield. Here is where the hope centered in the new Guggenheim process lies. The Shanks process, as operated in the average plant, recovers only some 60 per cent of the contained nitrate in the raw material. It is claimed that the Guggenheim process will recover regularly some 95 per cent. On this basis, the Bain figures would show a primary cost of \$8.92 per ton of nitrate, Guggenheim; against \$12.96 per ton, Shanks. Moreover, increase in yield is not the only economy claimed. The new process enables wholesale mining methods employing machinery. It is also said to make possible even the profitable reworking of the tailings of the old oficinas.

Rather more than usual secrecy has surrounded the development of this new process. It is known to be based on experience gained in large scale leaching of copper ores by this firm at Chuquicamata, where as great quantities as 20,000 tons of low grade material is daily crushed and leached in large open reservoirs. Plainly a hot water process would not be practical, and the Guggenheim process employs slightly warmed water, precipitation being obtained by refrigeration. The low heat required is obtained from the cooling system of the Diesel engines used for power and from the ammonia compressors used for refrigerating. The Coyanorte plant that went into operation during the middle of November represents five years of the most painstaking chemical and engineering experiment, both in their laboratories in the United States and in the fields in Chile. The great resources of the firm and its long mining experience have been employed without stint to assure success. The final erection of excavating and crushing equipment is being completed and large scale production is promised for the middle of March.

If this new process proves efficient, its economies, combined with a revoking of the export tax, may enable Chile saltpeter to meet its synthetic and by-product competitors on an equal price basis. June, 1927, will be the crucial month. Then the selling agreement of the Nitrate Producers Association expires, and then, so it is universally admitted, free selling will be resorted to. What the open quotations will be is still a matter of speculation; but they must represent marked reductions if the market is to be held. By that time the Guggenheim plant may be a very real, possibly the determining

factor in the situation.

Synthetic developments, including the new plant at Des Moines and the proposed plant at Hopewell, with the recently perfected new process abroad, will be surveyed, and the analysis made of the market position of by-product sulfate in our next magazine issue, March 10.

TOXIC EFFECTS OF SOLVENTS

(Continued from page 200)

produce intoxication and then when the individual is further subjected to these vapors, a slight narcosis or anaesthesia results. However, small doses are harmless.

Tetrachloroethane is a solvent which possesses a number of important advantages as a solvent in the manufacture of cellulose lacquers. On the other hand its use involves the disadvantage of its being highly poisonous. Thus in Germany its use is forbidden for this purpose and others. It not only has a narcotic action on the human organism, but it also has a very bad effect on the liver, producing fatty degeneration of the liver and jaundice. Under certain conditions death ensues. For further details see Archiv. fuer arp. Pathologie und Pharmakologie, volume 81, page 1.

The physiological action of benzine depends to a certain degree on its constitution. The benzines fall in the class of the so-called nerve poisons. When concentrated vapors are breathed, they produce paralytic effects. Then, again benzine vapors produce headaches, numbness, vertigo, and the like. Important information on this subject is contained in the article by Koester in Zeitschrift f. Duetsche Oel und Fettindustrie, 1920, numbers 28 and 29, and in another article by Lewin, in Journal fuer Gasheleuchtlung, volume 63, page 656.

The benzols, just like the benzines are nerve poisons. Moreover they also have an effect on the blood. The poisoning symptoms are similar to those described in the case of benzines. In cases of severe benzol poisoning intoxication is quickly produced and violet cramps are caused. These are typical. The action of the benzols is considerably stronger than that of benzine. Toluene and xylene have a stronger action than the lower boiling point benzols, such as light benzol and the like. For further details on this subject see Hans Wolff in Loesungsmittel der Fette, Oele, etc.,

Tetralin may be considered as being quite a harmless solvent. However, because of its great solvent powers, it must be held that its use should be carried out with care, for it is hardly to be expected that such a powerful solvent can be without some physiological action on the human organism.

While the dangers that are incurred by the use of these various solvents are very real, it must not be supposed that their use should be abandoned. This should by no means be the conclusion of the leader from this article. For it is possible to avoid all these dangers by exercising the proper care in the use of these solvents. They are very important chemicals and very advantageous effects are gained by their employment in the manufacture of cellulose lacquers. Furthermore the worker soon acquires a certain immunity to practically all of these solvents. The new man may be very adversely affected at the start, but after he has been working in the plant for some time, the slight doses of these solvent vapors breathed in during his work no longer have a potent effect on him. The vapors seem to act much like nitroglycerine in this respect. It is known that the newcomer or visitor to the dynamite plant will soon acquire a very severe headache and nausea from the absorption of nitroglycerine through the pores of the skin, but the acclimated worker does not suffer from these effects at all.

Certain individuals will be affected much more severely than others and will find great difficulty in attaining immunity. In such cases it is recommended that these workers be taken off work that requires their contact with the solvent fumes and be given other jobs around the plant, or be urged to seek work elsewhere. In conclusion it must be pointed out again that the removal of poison vapors is not only necessary to prevent the injury of the health of employees but also the destruction of property due to fires and explosions.

FERTILIZER TRADE PRACTICES

(Continued from page 204)

fertilizer tonnage, and I am very much in hopes it will eventually be adopted by all.

Ed. J. Buhner,

Buhner Fertilizer Co., Seymour, Ind.

The carrying out of the trade practices recently adopted should restore the confidence of the buyer and consumer alike, as past discriminations have set up discontent and retarded, rather than encouraged, the use of more fertilizer. We have all faith that confidence will

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again be restored by putting such simple practices to work.

H. R. Talmage,

Vice President, Long Island Prod. & Fertilizer Co., Riverhead, N. Y.

The "Code of Trade Practices," as discussed at the meeting of the representatives of the fertilizer companies in Washington last month was approved without a dissenting vote.

We heartily endorse all its provisions as a company, and are, and have been, carrying them out in practice.

As a small local company our operations are confined to a local market. Unless we walk in a very straight and narrow path, we will lose our reputation and market. Hence we try to play the game fair, both with our competitors and customers.

It has been our observation that local agents are the ones who are the chief offenders, so far as these unfair practices are concerned. Until the fertilizer companies find some way to control their local agents, the problem is still before us.

Wm. P. Ward,

Treasurer, Farmers & Planters Co., Salisbury, Md.

"That part of the Fertilizer Code of Trade Practices, contained in the Sections which do with Competitive Sales conditions—particularly on discriminations and rebates and protection against decline, to my mind, strikes at the root of one of the greatest evils of the Industry. The unbusinesslike methods pursued by the Sales Managers and Executives of a basic Industry as great as the Fertilizer Industry, have become a by-word of ridicule in the Commercial world. In no other business enterprise can be found such methods employed, and unless speedily corrected, the financial Institutions will withdraw their support from the Fertilizer Industry as a whole."

PUMPING CHEMICALS

(Continued from page 205)

However, they practically always have stuffing boxes on the impeller or runner shaft which are difficult to keep from leaking, thus requiring attention and repacking. They become vapor bound at times and are frequently difficult to prime when the pump is mounted above the liquid supply level. It is good practice to endeavor to have the pump suction about the same level as the supply level. This eliminates priming difficulties and also eliminates liquid pressure on the gland when the pump is shut down. Quite often foot valves are used on the end of the suction of a pump, in order to eliminate repriming every time the pump is started up. This practice is not recommended as it increases the friction in the suction, thereby decreasing the capacity; it makes the pump start up under full load and makes, when the pump is idle, a pressure on the stuffing box equal to the static head on the discharge line, thus increasing the probability of leakage.

Three general types of runners or impellers are made; the forward inclined blades or vanes, radial blades and backward inclined blades. The first style is very seldom used or recommended as this type causes a rising capacity-head characteristic. This means that as the capacity increases the head will also increase. This creates a widely varying power consumption and is particularly undesirable where motor drive is used. The most common method is the backward inclined blades which give a falling characteristic, where the head decreases as the capacity is increased. This method is particularly adapted for motor drive as the power consumption remains practically constant. This means higher efficiency and less danger of overload.

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Powder Manufacturers' Supplies and Fertilizer Materials of All Kinds head vary with the R. P. M. or tip speed of the impeller. As a generality the capacity will vary directly with the tip speed and the head will vary in proportion to the square of the speed. For instance, if a pump gives a certain capacity at 1200 RPM it will give one and one-half times that capacity at 1800 RPM. Again, if the pump gives a certain head at 1200 RPM the head at 1800 RPM will be (1800)? or two and one-quarter times the head at 1200 RPM.

A maximum safe speed of a centrifugal pump is approximately 1800 RPM. Even at this speed the impeller must be carefully balanced or undue vibration is set up, causing gland trouble and rapid wear of the shaft. Therefore for long life a lower speed is recommended.

To summarize centrifugal pumps, would say where higher efficiency and continuous operation are desired, where a slight dilution or heating is objectionable, where large capacities are used, a centrifugal pump is usually recommended, although the cost, maintenance and trouble are considerably higher than jet pumps.

The third class of pumps; i. e., the displacement type, comprises gear pumps, piston pumps, diaphragm pumps and air or steam operated blowcases or acid eggs. Probably the last mentioned type is most used, particularly for the more corrosive liquids. Before acid centrifugal pumps came on the market the acid blowcase was used more than any other style. Now their popularity is decreasing. They are usually operated by air pressure. It consists merely of an airtight container having four connections at the top. One connection (the discharge) has a pipe attached which extends to the bottom of the blowcase. The other three connections are the air pressure inlet, air relief and the liquid inlet. The liquid inlet pipe must have a swing check valve so no back flow is possible. Their operation is simple. The blowcase is filled by gravity by opening the air relief. When the case is full, the air relief is closed and the air pressure is turned on, which blows out the acid in the case, through the discharge. The operation is, of course, intermittent and requires an attendant. To eliminate the attendant a patented automatic air device, called the Bihn-Jones Air Device, manufactured by Schutte & Koerting Company of Philadelphia, Pa., can be used. This device automatically turns on and shuts off the air pressure on the air relief valves. With this device no air is wasted nor is it necessary to hand operate the blowcase.

Gear pumps are only used in chemical plants for pumping small quantities of liquids which are viscous, free from sediment and of lubricating nature. These facts, together with the fact that soft alloys cannot be used for the gears, restricts greatly their application.

Diaphragm pumps are primarily used for filter-press work. As rubber diaphragms are usually employed, hot solutions cannot be pumped. Diaphragm pumps are quite expensive and are only used where other types of pumps cannot be employed.

Piston displacement pumps are practically always made of iron. This restricts their use in the chemical field to such uses as the pumping of non-corrosive liquid. Where high heads are needed and a widely varying capacity, piston pumps are satisfactory. However, they are not as efficient as centrifugal pumps, are more costly and require more maintenance.

To sum up the question as to what method of pump is to be adopted in the chemical plant, would say that first, all the facts should be known as regards head, capacity, viscosity, corrodibility, temperature, suction, whether the use will be continuous or intermittent, etc. With these facts in mind, a survey should be made of the various possible methods as briefly outlined above. It will then be relatively simple to select the required pump for a given purpose.

Ethyl Acetyl Glycolate—98%

Butyl Butyrate—98-100%

Butyraldehyde—97½%

Butyl Tartrate—99%

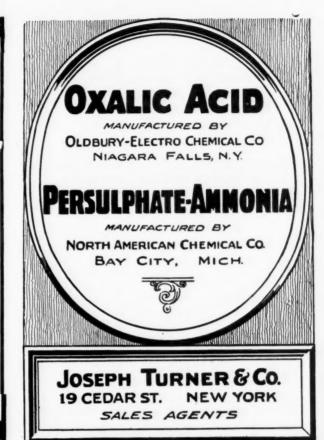
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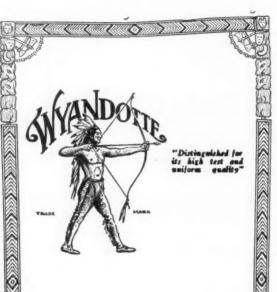
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GERMANY'S CHEMISTRY

(Continued from page 206)

preferred, Series B, with tenfold vote rights. The I. G. thus becomes the most highly capitalized corporation in Germany, outdistancing "Verinigte Stahlwerke," merged in 1926, with a capital of 800,000,000 marks. The new I. G. capital foundation will include 900,000,000 marks common, 160,000,000 preferred, Series A, and 40,000,000 preferred B. The latter, of course, combine the new B issue and the old 4,400,000 preferred, with a tenfold vote right in lieu of a hundredfold vote right to combat the danger of foreign capital invasion. It must be observed, however, that the new 40,000,000 B shares control 400,000,000 votes, even so, against the preposterous share of 44,000,000 under the hundredfold scheme; this is, however, but 27.4 per cent of total votes, against 40.7 per cent covered by the old preferred.

The 160,000,000 preferred A, it is understood, will be offered to "foreign friendly interests"; these may include

at least two American corporations.

Presented in tabular form, the new issues will be disposed of as follows:

posed of as follows.	
New Common Shares	
Mi	lions
	marks
At disposal of old I. G. shareholders (5 to 1 at 150, to be	
paid half on Nov. 15, 1926, and half on June 15, 1927)	128.33
Exchange of the 36.67 millions Koeln-Rottweil, in ratio of	
2 to 1	18.33
At disposal of former Rottweil shareholders, 1 to 5	3.67
At disposal of present Nobel shareholders, 1 to 10	3.75
At disposal of present Rheinisch-Westf. shares, 1 to 121/2	.96
Reserves for exchange with explosives plants	23.55 79.82
Reserves for future transactions	17.02
Total	258.40
New Preferred	
Three and one-holf per cent Series B, 10 vote, with 25 per cent payment to Leopold Casse la G. m. b. H. (having	
the 4.4 milion preferred already)	35.35
For later exchange for explosives preferred: Rottweil new, 125,000	
Nobel later, 125,000	

Six per cent Series A, one-vote	160.00
Annual Statement	

In the first year of its existence in present form, that is, the merger into one company (namely, I. G. Farbenindustrie A. G.) retroactive to January 1, 1925, the German Dye Trust paid a 10 per cent dividend (1924, 8 per cent) on gross profits of 168,560,000 marks (1924, 144,050,000).

The following recapitulates essentials from the balance sheets of the I. G. in 1924 and 1925, respectively:

(Millions of gold	d marks) Gross	Costs	Deduc- tions	Clear
I. G. Farbenindustrie	168.56	45.19	55.77	67.59
Badische Ani'in	39.08	8.58	15.61	14.00
Bayer	33.39	8.21	10.19	14.88
Hoechster	34.57	9.19	0.67	14.70
A. G. f. Anilin	15.93	7.29	3.55	5.07
Weiler ter-Meer	4.81	3.04	0.16	0.15
Griesheim E'ektron	16.27	7.74	4.60	3.91
Total, 1924	144.05	44.05	44.78	54.69
International B	argainir	g		

Rumors and speculations were echoed frequently in the German press concerning probable agreements between the German I. G. and parallel interests abroad. The latest rumor pertains to possible agreements that may be reached in America, consequent to the visit of Doctors Bosch, Bueb, ter Meer, Schmitz, and others. The I. G. is more or less directly operating dye plants at Paterson, N. J., and Albany, N. Y., and a dyestuffs manufacturing agreement is in course with the Grasselli Co., of Cleveland.

One definite triumph was enjoyed by the I. G. in 1926, with the conclusion, on August 7, of a dye pact between Germany and Japan, in connection with commercial

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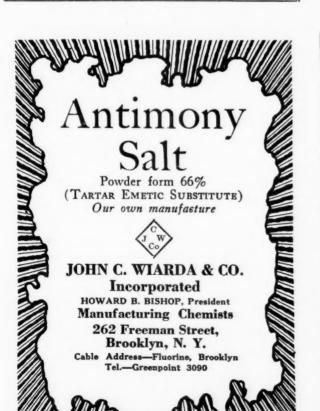
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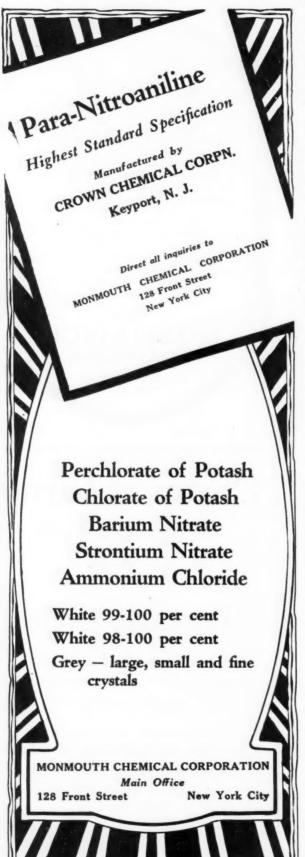
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treaty negotiations. This agreement permits entry into Japan under most-favored-nation treatment of German dves that are not already produced in that country. It ends a situation which existed between Germany and Japan, whereby the latter had an effective embargo on dyes, subject to permit, that originated in countries with which Japan had no commercial treaty. In the meantime, gains were made on the Japanese market with dyes of American, British, and other origin.

Merger in October of Brunner Mond & Co., Nobel Industries (Ltd.), British Dyestuffs Corporation, and United Alkali Co. (Ltd.) into Imperial Chemical Industries (Ltd.), capital £38,200,000, revives speculation as to whether the I. G. will eventually frame a pact with this new British company, having proposed but failed to consummate the old Anglo-Saxon dye pact under nego-

tiation between 1922 and 1924.

After forming a community of interest with the concern of Bemberg, of Barmen, Vereinigte Glanzstoff Fabriken, Elberfeld, and Sydosaus, of Stettin, last year, the I. G. joined interests with Courtaulds of London, an agreement in which American Viscose participates. This international combination is said to represent 65 to 70 per cent of world production of artificial silk. A plant going up at Dormhagen, near Cologne, will be mutually owned by Vereingte Glanzstoff and Courtaulds. Representations will be exchanged by each in the other's country. "Glanzstoff-Courtaulds G. m. b. H." has already been organized at Elberfeld.

Deutsche Gasolin A. G., of Berlin, was founded by the I. G. after acquisition of Stinnes-owned shares of the Stinnes Riebeck Oil Works in August, 1925. This company brought out "motalin," an antiknock with iron carbonyl charge, and promises to be identified with the I. G.'s future distribution of oil from coal. It is significant that Standard Oil and Royal Dutch Shell are each reported to be invested to the extent of 25 per cent shares of this enterprise. It is capitalized at 12,000,000

marks.

One commercial success by the I. G. was the conclusion of a contract with "Russgertorg," handling I. G. production for Russia, involving delivery of around 70 per cent of Russia's aniline dye imports for the next three years, as well as pharmaceuticals and heavy chemicals. I. G. will lend assistance in perfecting the organization of the Russian chemical industry, and the latter's chemists and engineers may receive training in Germany. The deal may involve some 200,000,000 marks, or \$50.000.000.

Progress is reported of I. G. concentration of plural sales agencies abroad. Notable foundations in 1926 were Dyestuffs, Ltd., Manchester, England; warehouses and centrals at Arnheim, the Netherlands; Teerfarben A. G., Zurich, Switzerland (capital 1,000,000 marks);

and a sales agency in Belgrade.

Dves

It is estimated that current production of dyestuffs in Germany amounts annually to between 70,000 and 75,000 metric tons, against approximately 130,000 tons before the war. Exports of dyes from Germany, amounting to 109,000 tons in 1913, had declined to around 34,000 tons in 1925 (reparations deliveries excluded), or less than one-third the pre-war figure. The then value of dyestuffs exports, amounting to 218,000,000 gold marks, compares with an estimated value of 186,000,000 marks in 1925. Barring gold inflation since the pre-war period, comparative values have risen. This is explained by the fact that Germany is now exporting the higher-priced dyes, whereas before the war, in covering over 80 per cent of world demand for dyes, Germany exported more of the cheaper bulk colors.

Concentration of dyestuffs production necessarily fel-

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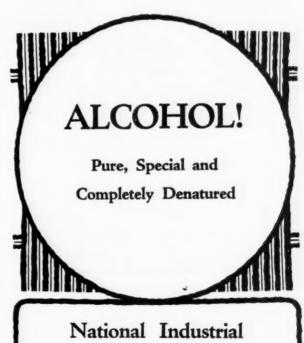
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New York 2-6 Cliff St. Boston 40 Central St. lows the I. G. merger. While production before the war was distributed among the several I. G. plants, the current tendency is to center production in the plant or plants best equipped to specialize. It appears that the Hoechster Farbwerke are more or less leading in this respect, and that they have taken over some Badische manufacture of the fast indanthrene dyes and possibly some of Griesheim's naphthol A-S production, though the Badische retains its indigo department. Leopold Cassella Co., it is said, is specializing on the newer dyes for artificial silks.

Nitrogen

The I. G.'s production of fixed nitrogen by the Haber-Bosch process of direct ammonia synthesis at the Ammoniakwerk G. m. b. H., Merseburg (Leunawerke), and at Oppau bei Ludwigshafen amounts to about 350,000 tons annually. In addition the Piesteritz and Trostberg calcium cyanamide plants, have combined capacities of 80,000 tons of fixed nitrogen. The coke plants, operating less by-product ammonium sulphate than before the war, because of the crippling of the iron and steel industry, are producing some 70,000 tons of nitrogen. The I. G. is studying and making progress with development of "mixed" fertilizers. It would not be at all surprising if the Lilienroth electric furnace to go into operation at Piesteritz next spring would be able to commercialize local low-grade phosphate rock.

Oil From Coal

Plans by the I. G. to hydrogenate lignite, doubtless catalytically, have been one of the leading topics of chemical interest here this year. It appears that the I. G. will build, or has already begun construction of a plant contiguous with the Leunawerke to produce some 250,000 to 300,000 tons annually of oil from coal.

Solvents and Lacquers

Hoechster Farbwerke, producing butyl alcohol and other solvents synthetically, has begun the manufacture of nitrocellulose lacquers and promises to dominate this field shortly. These works are advertising a mixed line of solvent mixtures under such trade names as Anon, Methylanon, Palatinol A, JC, M, Solvent E 13, GA, GAC, GM GMC, Pyranton, Tamasol J, Elaol, Plastomol P, etc. Dominance of the nitrocellulose lacquer field here by Hoechster would result eventually in weeding out the weaker of some 100 local manufacturers of pyroxylin lacquers.

Artificial Silk

In community with Courtaulds, of London, the I. G. is extending its artificial-silk manufacture locally. At Dormhagen, near Cologne, a plant is in course of construction to operate the copper-ammonia process, while another construction at Berlin-Lichtenberg, known as the "Aceta G. m.b. H.," is expected to go into commercial operation in the Spring of 1927. The Agfa and Bayer plants, respectively, already make artificial silk by the viscose and copper-ammonia processes.

Light-Metal Alloys and Electrochemical Products Griesheim-Elektron, with a complexity of plants (including Elektrochemische Werke G. m. b. H., Bitterfeld, Elektrometallurgische Werke Horrem A. G., Horrem; Elektro-Nitrum A. G., Rhina; and Deutsche Molybdaenwerke, Teutschental), is featuring light-metal alloys of aluminum and magnesium, producing some 5,000 tons of aluminum and 4,000 tons of magnesium annually. Its "Elektron" metal, with 90 per cent magnesium and a specific gravity of 1.74 to 1.83, or one-half that of aluminum, is conspicuous and will be referred to later, Griesheim-Elektron is also producing elemental calcium, sodium, and barium for alloy. Interest, further attaches to its production from monazite sand of cerium, which (according to a survey of the Dye Trust issued in 1926 by the banking house of Schwarz, Goldschmidt & Co., of Berlin) replaces matches. "One kilogram of

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cerium-iron," says this brochure, "is said to be capable of replacing 5,000,000 matches." The kilogram yields some 5,500 small pieces of 5 millimeters length, which can be ignited about 900 times.

The Griesheim-Bitterfeld manufacture of electrolytic caustic soda and chlorine from salt is also of very great importance. Of late graphite has been produced by the electrolytic process in Bitterfeld, also various artificial abrasives which partly supplant corundum and other abrasives. Likewise, synthetic rubies, sapphires, The Deutand other precious stones are made there. sche Edelstein Gesellschaft, vorm. Herm. Wild A. G., of Idar on the Nahe, is controlled by the I. G.

Griesheim also makes electrolytically ferrotungsten,

ferromolybdenum, and carbon disulphide.

The I. G. makes synthetic acetic acid from calcium carbide in four plants (Alexander Wacker A. G., Munich) and ethyl alcohol from carbide in one plant at Ludwigshafen. The former manufacture has done much to emancipate Germany from imports of gray lime acetate and even threatens acetic-acid manufacture by six to eight plants each operated by the two large wooddistillation concerns, Holzverkohlung A. G., Constance (subsidiary of the Gold & Silber Scheide-Austalt, Frankfort), and Verein fuer Chemische Industrie, of Frankfort. The I. G. is reported as constructing a plant at Duisburg to recover oxygen from the air. The plant will occupy a site of 30,000 square meters, it is said. Griesheim-Elektron leads in production of industrial gases. Its chlorine manufacture has been mentioned. On the oxygen market it has control of the Gesellschaft fuer Lindes Eismaschinen and the Oxyhydric A. G.

German Syndicates

To maintain price uniformity or to sell communally, and sometimes to regulate production by allocation, most German chemical producers are organized in trusts, syndicates, conventions, and other associations, popularly known as cartels. The result is that a network of cartels is spread throughout the local chemical industry, many producers of different products being bound in as many cartels. Leading instances of these formations are furnished by the German Dye Trust, Frankfort, controlling production and sales; the Nitrogen Syndicate, Berlin, coincident with the Dye Trust, selling only; the Potash Syndicate (sales), Berlin; the Benzol Association, of Bochum.

An outstanding development in the German chemical cartels in 1926 was the effort, partly successful, to extend beyond local borders and form international associations. European glue producers, after preliminary meetings in Brussels, Frankfort, and London, concluded an international price convention at Lucerne in September. European saccharin producers, including German, Swiss, Czech, and French, formed a convention early in 1926 to control production and prices of an oversaturated market. An Anglo-German-American combine on artificial silk has been mentioned elsewhere. A special agreement on borax exists between German refiners and a British supplier of raw materials, having been renewed, effective October, 1925. At Swedish initiative European super-phosphate interests, including German, met in Paris on June 1 and 2 to discuss improved methods for increasing acid phosphate consumption. Future meetings have been arranged. German and British producers of creosote oil have a private agreement on this product. The German match industry, in community with the Swedish match trust, is in course of reducing production of an over-saturated market.

German lithopone producers organized horizontally and formed (effective April 1) a lithopone syndicate known as Lithopon Kontor G. m. b. H., with headquarters at Cologne, Eintrachtstrasse 163-171. The German Dye Trust (Farbenfabriken vorm. Fried. Bayer, Leverkusen) acquired a leading position in this cartel, which sells to the domestic market and controls about 60 per cent of local production.

German manufacturers of pyroxylin lacquers formed two associations, namely, Gesellschaft Deutscher Lackfabriken G. m. b. H. (Berlin) and Tempoloid Lack G. m. b. H. (Dusseldorf), chiefly to study better methods of production and to make findings available to members.

Producers of yellow prussiate of potash formed a price convention in June. A potassium and sodium nitrate convention will be dissolved, effective January 1, 1927, and production centered in the German Dye Trust. One independent producer (Chem. Fabrik in Billwaerder vorm. Hell & Sthamer A. G.), will continue production on a Chile saltpeter basis in competition with I. G. air-fixed production.

A sodium sulphide convention is reported in course of formation for the purpose of stabilizing prices.

The sodium sulphide convention will include the Rhenania-Kunheim Co., Berlin; Vereinigte Chemische Fabriken A. G., Berlin; Th. Goldschmidt A. G., Mannheim-Rheinau; Roos & Co., Berlin; Concordia Chemische Fabrik, Leopoldshall-Stassfurt, and A. G. der Chemischen Produktenfabrik Pommernsdorf, Stettin.

Harkort'sche Bergwerke and Chemische Fabrik in Haspe declined to enter the convention.

The German Dye Trust will get a sales quota of 50 to 60 per cent of sodium sulphide, and the convention (Continued on page 264)

EXPORTS AT NEW YORK

(Continued from page 244)

NULOMOLINE—1 bbl., Jan. 19, Melbourne;
3 bbls., Jan. 19, Brisbane; 2 bbls., Jan. 19,

Swdney

3 bbls., Jan. 19, Brisbane; 2 bbls., Jan. 19, Sydney
PARAFFINE—520 bgs., Jan. 20, Gothenburg;
30 bgs., Jan. 20, Ma'mo; 250 bgs., Jan. 20, Stockholm; 150 bgs., Jan. 21, Santiago; 3,520 bgs., Jan. 13, Barcelona; 20 bgs., Jan. 23, Brdeaux; 224 bgs., Jan. 14, London; 100 cs., Jan. 10. Lisbon; 100 bgs., Jan. 10, Lisbon; 393 bb's., Jan. 1, Dublin; 120 bbls., Jan. 1, Dublin; 222 bbls., Jan. 22, Kobe
PETROLAGAR—14 cs., Jan. 14, Callao
OILS—5 cs., Jan. 14, London; 3 cs., Jan. 6, London; 3 cs., Jan. 24. Montevideo; Argo, 110 cs., Jan. 3, Capetown; 20 cs., Jan. 3, A'gca Bay; 25 cs., Jan. 3, East London; 70 cs., Jan. 3, Port Nata'; 6 cs., Jan. 3, Delagoa Bay; Castor, 6 cs., 19 Prestrn; Coconut, 30 drs., Jan. 24, Havana; Colza. 5 bbls., Jan. 20, Gothenburg; Cott.nseed, 325 cs., Jan. 21, Progreso; 100 bbls., Jan. 3, Marseiles; 50 cs., Jan. 3, Algoa Bay; 450 cs., Jan. 14, Valparaiso; 50 cs. Jan. 10, Nassau; Linseed, 5bb's, Jan. 22, Pa a; 10 drs., Jan. 10, Nassau;

12 drs., Jan. 15, Havana; 55 drs., Jan. 21, Buenaventura
POTASSIUM SALTS—Bichromate, 4 cks.,

Jan. 14, Callao; Chloride, 10 kgs., Jan. 4, Pto Colombo; 20 kgs., Jan. 21, Progreso PUMICE STONE—12 bbls., Jan. 14, London

ROSIN—1 bbl., Jan. 22, Santiage; 14 bbls., Jan. 22, Para; 15 b's., Jan. 22, Parnahyba; 15 bbls. Jan. 22, Manaes SHELLAC—13 bgs., Jan. 11, Havana

SHELLAC—13 bgs., Jan. 11, Havana
SOAP—50 cs., Jan. 6, London; 125 cs., Jan. 14, Cienfuegos; 8 cs., Jan. 2¹, Manzanillo; 340 cs., Jan. 21, Santiago; 700 cs., Jan. 17, Montevideo; 110 cs., Jan. 4, Aux Cayes; 200 cs., Jan. 21, Cienfuegos; 200 cs., Jan. 21, Progreso; 2,:50 cs., Jan. 15, Havana; 50 cs., Jan. 21, Guayaquil; 50 cs., Jan. 15, Jeremie; 30 cs., Jan. 15, Port de Paix; 250 cs., Jan. 15, Cape Haitien; 275 cs., Jan. 11, Havana
SODIUM SALTS—90 kegs, Jan. 21, Buenaventura; Bicarbonate, 1/0 kegs, Jan. 4, Cartagena; 2 cs., Jan. 24, Montevideo; 5 kegs, Jan. 21, Progreso; 100 bb's., Jan. 24, Havana; 10 bb'ls., Jan. 15 Pto Colombo; 10 kegs, Jan. 25, Mcntego Bay; Caustie, 500 drs., Jan. 21, Santos; 576 drs., Jan. 22, Kobe; 250 drs., Jan.

21, Buenaventura; 150 drs., Jan. 11, Havana; 34 drs., Jan. 11, Sagua; 1,000 cs., Jan. 2, Santos; 20 drs., Jan. 15, Havana; 200 drs., Jan. 24, Havana; 15 drs., Jan. 14, Santiago; 5 drs., Jan. 21, Santiago; 100 drs., Jan. 19, Prestor; 82 drs., Jan. 17, Buenos Aires;; 30 drs., Jan. 21, Progreso; 50 drs., Jan. 21, Pto Colembo; Hypisurfite, 225 bgs., Jan. 14, Antofagasta; Silicite, 5 drs.. Jan. 21, Santiago; 5 drs., Jan. 21, Progreso; Sulfite, 6 kegs, Jan. 21, Cienfuegos

TARCH—40 cs., Jan. 10, Hamilton; 432 bgs., Jan. 10, Constantinople; 20 bbls., Jan. 1, Dublin

SULPHUR-10 bbls., Jan. 15, Pto Colombo TALC-16 bgs., Jan. 19, Sydney; 14 bgs., Jan. 14, Callao; 3 cs., Jan. 14, Antofagasta; 11 bgs., Jan. 21, Progreso

ULTRAMARINE-8 bb's., Jan. 22, Kobe ZINC-Chloride, 20 cs., Jan. 22, Para; 1 cs., Jan. 24, Montevideo; Oxide, 320 bbls., Jan. 14, Liverpool; 100 bbls., Jan. 13, Marseiles; 1 bbl.. Jan. 24, Buencs Aires; 10 bbls., Jan. 15, Pto Co'ombo; Stearate, 5 bbls., Jan. 26, Montevideo Jan. 15, Pto Co'om Jan. 26, Montevideo

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German dealers in drugs and chemicals formed in March a mutual association, outside of cartel boundaries, however, called "Reischverband der Deutschen Drogen & Chemikalien E. V." with Berlin headquarters. It unified four previous sectional associations.

Griesheim-Elektron in association with Gesellschaft Lindes Eismaschinen attempted to corner the oxygen market against competitors by lowering prices in April.

market against competitors by lowering prices in April.

Negotiations in the existing Magnesium Chloride Cartel and the Bromine Syndicate are in course, after threats by the Wintershall concern to retire from them if its (Wintershall) production quota of magnesium chloride (34 per cent) was cut down. These negotiations were continued after October 30.

At the time of this writing (November, 1926) it is stated that these cartels will be reorganized before the expiration of 1926, so that revised production quotas may be expected to go into effect on January 1, 1927.

The Dye Trust agreement with local wood distillers, whereby the latter sell I. G. synthetic methanol production on all markets outside the United States, continues until the end of 1926, with prospects of renewal. A parallel agreement between the I. G. and these wood distillers on acetic acid runs until the end of 1929.

Holzverkohlungsindustrie (Constance) and Verein fuer Chemische Industrie (Frankfort) are reported as angling for a merger to reduce costs of wood methanol production against I. G. competition with its synthetic product. Such a merger has not yet been effected.

Four German firms producing carbon disulphide entered a sales community, effective January 1, 1926, and established a sales central known as Schwefelkohlenstoff Verkaufs G. m. b. H., at Frankfort on the Main.

Gebr. Heyl, of Berlin, and A. Behringer, producers of mineral colors, merged into Heyl-Behringer Farbenfabriken A. G., capitalized at 1,000,000 marks.

Chemische Fabrik Milch A. G. (of Oranienburg and Danzig), on the one hand, and Chemische Fabrik Pommernsdorf (Stettin), Chemische Werke Roemer (Naumburg on the Saale) and Chemische Industrie & Papierfabrik (Danzig) on the other, merged on July 1 to concentrate production and eliminate competition in superphosphate. The merger treaty is for a term of 15 years.

Vereinigte Chininfabriken Zimmer & Co. G. m. b. H. (Frankfort on the Main) and C. F. Boehringer & Soehne G. m. b. H. (Mannheim), quinine producers, amalgamated to rationalize output, under the name "Vereinigte Zimmer & Co.," and are located at Frankfort on the Main.

EXTRACTION BY SOLVENTS

(Continued from page 207)

sers, separators, tanks for measuring and collecting the various solutions and solvents and a distilling set.

It should be mentioned that the cylinder is provided with a set of heating coils through which steam is passed which brings the temperature of the meal, resting on these coils, to the proper point before steam is added to the cylinder. After this has been done direct steam is blown into the cage. The fat solution is then run out into a regulating still which continuously evaporates the solvent. The heating is accomplished by means of a set of closed steam coils and this still is so operated that the intermittent flow of solution that it receives, as the extraction process is completed in one cage after the other, is converted into a continuous flow which then enters a set of six stills, these being connected together so as to make two series of three stills each. These stills are provided with the usual means for maintaining the level of liquid at the proper point in the trays.

The authors have analyzed the operation of this ap-

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paratus in a way that makes it easily understandable, there being seven different stages. The first stage consists in the treatment of the meal with the solvent vapor. The second stage consists in the washing of the meal with a strong solution of oil and solvent so as to obtain a solution which contains a very high percentage of fat or oil ready for distillation. The third stage consists in a second treatment with the solution. so as to obtain the solution charge required for the second stage. The third stage consists of a third treatment of the meal with solution so as to obtain the charge for the third stage. The fifth stage is a final treatment of the material with the pure solvent. The sixth stage is a drying operation in which most of the liquid mechanically retained by the meal is forced out of it by the centrifugal force that is generated during the revolution of the cage, the material being warmed by in-direct steam during this process. The seventh and last stage consists in steaming the meal with the aid of direct steam so as to remove the last traces of solvent. This is in fine the entire operation of the extraction apparatus.

The speed of rotation of the basket or cage varies throughout these stages. Thus the speed is slow through the first five stages and this is sufficient just to keep the meal in a contant state of agitation and changing position. The result of this is that the meal, moistened with the solvent, does not form balls and enclose dry material which is not reached by the liquid. Agitation of the meal is thus accomplished without the aid of agitating devices. The speed of the basket is raised during the lasting two periods with the result that the meal forms a cylinder, the walls of which are of even thickness. This is again an important condition for the steam will find no difficulty in passing through an even thickness of wall and will remove all the solvent that is present

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Special design is resorted to to obtain a machine which will give these results. The charging and discharging devices are quite novel as well as the automatic operation of the valve by means of a cam system. In this manner each portion of the operation of the extractor is accurately timed and controlled without human supervision being required.

The oil man will of course be interested in the quality of product that is obtained by this system. It has been tound in experimental installations that the purity of the oil is very high. Thus in the case of linseed oil, the product is of such high purity that it possesses but little

of the characteristic linseed oil odor.

Another advantage is that the meal is delivered in a dry condition and so can be worked up without the usual difficulties that surround the process when the meal is wet. In closing it might be said that the importance of this development, if it is ultimately successful, will rest mainly in the aid that it gives the extraction plant in using volatile solvents for fat extraction. As is well-known this process has always been unpopular, although effective and economical, for the difficulties encountered in its application have been so many and so varied that they have at times offset the advantages.

Solvents for Oil Seed Extraction By Louis C. Whiton

Activity in connection with the solvent extraction of oil seeds has been particularly marked, of late, in the United States. This method has been widely and successfully adopted in Europe for the last ten or twenty years but comparatively little is known in the United States in connection with the practical application of different solvents.

Such a solvent must dissolve the oil, not dissolve the color from the seed, be easily vaporized and homogeneous in composition, distill at a temperature below 212°, have no "light ends," and have small fire hazard.

Solvents may be classed in one of three categories: Inflammable Solvents are: Petroleum Ether, Gasoline (motor fuel), special cut of gasoline, ether, benzol. Semi-Inflammable Solvents are: Ethylene dichloride, trichlorethylene 75%—benzol 25%; mixture, carbon tetrachloride 30%—gasoline cut 70% mixture. Non-Inflammable Solvents are: Trichlorethylene, carbon tetrachloride.

For use in commercial extraction plants, petroleum ether is not interesting except in special cases. Its boiling point is so low that it is difficult to condense and therefore the loss is unduly high. In view of its high cost, this removes it from practical consideration. Gasoline such as is used for motor fuel is not suitable without further refinement. Special cut of gasoline obtainable on the European market is the ideal solvent from the standpoint of the quality of oil produced. It has been produced in the United States at individual extraction plants from good quality gasoline. Ether is not a suitable solvent because of its high cost and the difficulty experienced in condensing it without undue loss. Benzol is one of the easiest to obtain and most satisfactory solvent for many substances. Its disadvantage lies principally in its tendency in common with the other aromatic series of solvents, to dissolve some color from certain seeds, and thus produce a darker oil than that obtainable with the special gasoline cut.

The price is approximately the same as gasoline and its distillation range should not be more than 4°F, one of the points being its boiling point of 176°F. It is therefore an extremely pure compound which is easy to distill and condense. It is consequently extremely easy to eliminate all traces of this solvent from the oil and meal. It should be thiophene free.

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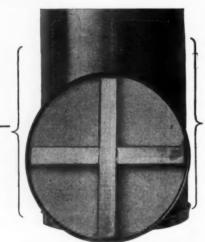




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the benzol plants of coke-oven and gas works. The cut known as "raw benzol" boils between 140°F. and 230°F. It is only during the last four hours of a twenty hour distillation in the raw benzol still that any products are produced boiling over 195°F. Therefore it would be possible to cut the distillation at this point and to throw all of the products above 195°F. into the raw toluol fraction. This would produce a solvent with the proper boiling point, but the degree of necessary refining would have to be determined from experience of extracting with the above product. The writer does not know of instances where this product has been employed for extraction, but offers it as a suggestion as a possible low cost solvent.

"Elaychloride" "Ethylene Chloride" or by the more exact term "1, 2-dichlorethylene." This is intermediate between inflammable products and non-inflammable products such as trichlorethylene and carbon tetrachloride over which it is claimed it has the advantage of hydrolysing to a less extent. Its inflammability is low since it requires a concentration in air of 6.2 per cent before the lower explosive limit is reached, whereas the lower explosive limit of ether in air is 1.71 per cent, benzol 1.41 per cent and an average gasoline 1.5 per cent. It may be considered as having one-quarter the tendency to explode as inflammable products. However it should be noted that ethylene dichloride air mixture cannot be exploded by a spark but requires an open flame at least 1 or 2 inches in length to start the explosion which is a feeble one. The product possesses a characteristic odor similar to chloroform and trichlorethylene and it is quite certain that its presence in air would be detected by the sense of smell long before its concentration approaches the 6 per cent mark. Its inflammability is not great, since, although it will burn, a draft of air created by the heat is sufficient to extinguish the flame. Due to the fact that it is heavier than water, it may be extinguished by water in contradistinction to benzol

With a solvent such as ethylene dichloride, the writer does not believe that there is any real fire or explosion hazard in connection with any recognized widely-adopted extraction system. However it would appear as an important step on the part of the manufacturers of this product for them to settle the matter definitely from the insurance underwriter's standpoint, since the principal advantage of an expensive solvent such as this (costing \$0.10 per pound, or \$1.07 per gallon) is the lowest insurance rate that should be obtainable. Also the authority should be obtained to utilize such a product within the limits of large cities.

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Local Market Conditions

CHICAGO

Conditions in general and chemical trade conditions in the Chicago district are characterized as fair and improving. There has not been any great activity in heavy chemicals. Stearic acid and red oil have come in for some notice and the price of stearic acid has been affected by the unsettled conditions of the market. Otherwise there have been no price movements worthy of comment noted. Collections are good.

BOSTON

General business in the New England states has been fair with the conditions in the chemical business not very good. Over the past few weeks there has not been any decided activity in any particular item and there has not been a price change of importance. Collections which had been fair, are now getting slow.

DETROIT

The alkali plants of this district are operating in full force and the pharmaceutical manufacturers also report a very good business. On the other hand, some industries including the automobile, are not operating at capacity, although an increase in production is expected shortly. Chromic acid seems to be much in demand lately. There have been no important price changes in this territory lately. Collections are fairly good.

KANSAS CITY

January has been a very satisfactory month in the Kansas City section. Business has been in good volume and due to the cold spell, alcohol has been especially active. A good volume of business is moving in other lines also, though the situation on alkalis is still disturbed with caustic soda prices being quoted at varying levels. Practically no margin of profit is allowed the dealer on this item, with 1.c.1. lots available at slightly higher figures than carload. There is a slightly weaker undertone to Glycerin as the season advances and the heavy demand is falling off, though no fundamental change has been made as to price. On advance the demand for Epsom salts has been more active than usual. With the modification of the weather in this territory the demand for anti-freeze alcohol is expected to



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Local Market Conditions

decrease. Codliver oil is active in anticipation of the Spring movement. Good interest is likewise shown in all spray materials. Collections are fair.

SAINT LOUIS

Despite rumors of poor business in the St. Louis district, conditions in the chemical trade of this section were good during January. The beginning of February, however, witnessed a slight let up in the shipments. Contracts having been completed on anhydrous ammonia, the St. Louis market has apparently become stabilized at 111/2c tb. Movement of copper sulfate to the agricultural trade has already started, and the market is firm. Makers of stearic acid have been competing for business in their section and prices have been cut, resulting in reductions in aluminum and zinc stearate of 2c tb. Castor oil is in much demand and during the past month has advanced lc tb.

NEWARK

Naturally, with the turn of the year, inventory period etc., a ma-terial reduction in the volume of trade is noticeable as against November and December but in comparison with the same period last year, present volume is only about 5% less. An advance of 1/2c pound on oxalic acid was the only price change of importance of weeks, but unless business is more active there is likely to be a reduction in price of several commodities before long. Alcohol for industrial purposes is extremely weak with substantial cuts in existing card schedules being made to bonafide buyers. It has become a buyers market exclusively, with producers apparently carrying heavy stocks and the demand far below the supply. Collections during late January were slow, but are better now and may be called fair.

BUFFALO

Local manufacturers have very optimistic outlooks for good business during the current year. Buying during January was more or less restricted in a routine way due to the fact that a number of manufacturers had taken out commitments on their last years contracts which carried them well into Janu-

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Local Market Conditions

ary. It is expected that during February we shall find a steady withdrawal on 1927 contracts. Chinawood oil is on the advance and though the situation in China was not taken seriously by buyers, many of them got in at low levels. Denatured alcohol is weak due to the moderate Winter weather and price concessions have been made for spot business. Methanol and solvents are in a firm position. Sales of turpentine and rosins have been made due to the drop in the market, mostly for nearby delivery. Shellac is easy with consumers drawing on low price contracts of last year. Collections are a little below the average.

CLEVELAND

Chemical business in Cleveland and surrounding territory has been very quiet for the past six weeks. Paint manufacturers have not been very active although some of them claim that they have running on full time. Linseed oil has been quiet and prices have fluctuated over a narrow range with little interest expressed by consumers. The interest in Chinawood oil has been better, partially due to the fact that buyers inventories have been low and also to the critica! conditions existing in China at the present time. There has been considerable buying for spot and future. Quotations at the moment in tank cars on the Coast are 153/4c fb. The alcohol market has been quiet due to the adverse weather conditions. Glycerin likewise is quiet and prices are slightly weaker.

PHILADELPHIA

Business during the past week has steadily improved and there is a better feeling throughout this territory. January sales in most instances were up to the average which indicates a volume of business considered fairly satisfactory. Denatured alcohol has again been reduced due to the lack of demand and over abundance of supply. Barium chloride is still firm at \$65.00 to \$67.00 ton. Barium nitrate is firm and in good demand. Copper sulfate orders are increasing in volume and the market remains firm. Carbon tetrachloride is in fair demand. Naphthaline is in better demand at 41/2c@5c to for flakes and 51/2c@ 6c th for balls.

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Cooper & Co., Charle s
Du Pont de Nemours, & Co., E. I.
Greeff & Co., R. W.
Innis, Speiden & Co.
Jordan & Bro., Wm. E.
Monsanto Chemical Works
Roessler & Hasslacher Chemical Co.
Tar Acid Refining Corp.

Organie

American Cyanamid Co. Cleveland-Cliffs Iron Co. Cooper & Co., harles Eastman Kodak Co. General Co.
Grasselli Chemical Co.
Grasselli Chemical Co.
Grasselli Chemical Co.
Graff & Co., William S.
Greeff & Co., R. W.
Heyden Chemical Corp.
Innis, Speiden & Co. Mallinckrodt Chemical Works
Monsanto Chemical Works
Roessler & Hasslacher Chemical Co. Victor Chemical Works

American Cyanamid Co. Cooper & Co., Charles Du Pont de Nemours & Co., E. I. General Chemical Co. Grasselli Chemical Co. Heyden Chemical Corp.
Monsanto Chemical Works
Pennsylvania Salt Manufacturing Co.

Denatured

Denatured

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Berg Industrial Alcohol Co., David

Commercial Solvents Corp.

Federal Products Co.

Gray & Co., William S.

Miner-Edgar Co.

Roessler & Hasslacher Chemical Co.

U. S. Industrial Alcohol Co.

Cleveland-Cliffs Iron Co. Creerians-Chini Fron Co.
Cooper & Co., Charles
Gray & Co., William S.,
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Soaboard Chemical Co.

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Warner Chemical Co.
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Pennsylvania Salt Co.
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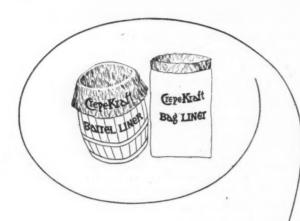
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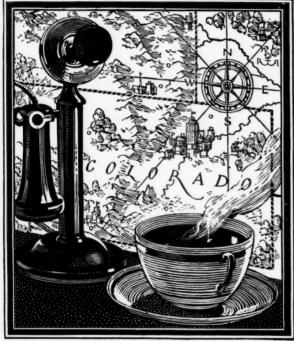
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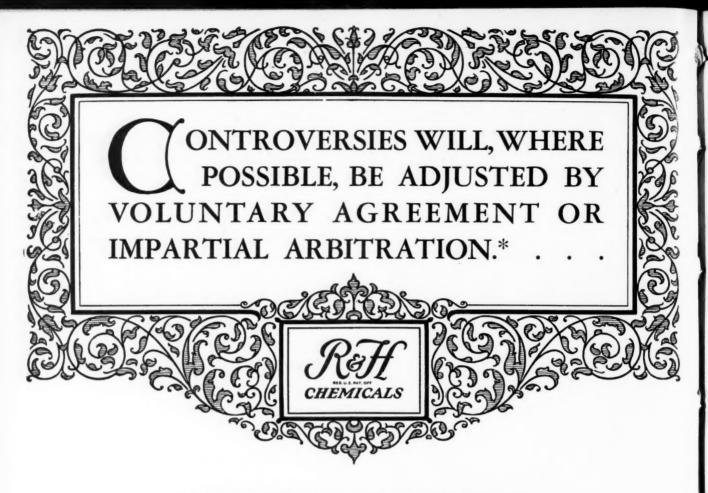
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